From the desk of



JOSEPH CREA

6/28/71 Janet Thomas = The attached sheet is a Correction and addition of Refuse Haulers Licenses Since original lists were made. Apre this rectifies your records please don't heritate to call,

Die Capy

1971 REFUSE HAULER'S LICENSES (Starting License #1)

1971 Licen		Address	Telephone	Description	of Truck
<u> </u>	Hame	11441 C33	<u>rerepirone</u>	<u> </u>	<u> </u>
6	Adams, Herbert dba Herb Adam's Trucking	752 Lafond	225-5318	'62 Chev	Y16-086
43	Addyman, John	1611 Euclid	774-8437	'69 Ford	Y28-917
174	All State Disposal Service, Inc.	7570 Highway #65 Fridley, Minn.	784-5244	'70 Dodge	YC6564
168	Allan, Daniel	ATTO ROBERT TRAIL	454-2336	'69 Ford	U247 5
170	dba Danny's Rubbish	ROSEMOUNE, MEMI .54.	. 11	'63 Ford	Y24-429
88	Anderson, Floyd dba Al & Pete's Rubbish	781 Englewood	488-6977	'61 Ford	¥11-675
73	Anderson, Melvin	2172 E. 6th St.	735-1296	'70 Chev	¥32-749
82	Anderson, Raymond	1315 Lake Elmo Rd	. 777-1692	'69 Chev	¥30-413
165	dba Anderson Rubbish	Lake Elmo, Minn.	" /	'67 Ford	Y31-90 6
169	Anderson, William	543 Fuller	2266830	'60 White	YS-1452
75	Bearth, James dba Jim's Rubbish Removal	761 W. Iowa	489-7685	70 Chev	YT-8873
132 133 134 135 136	•	6900 Dixie Ave. Inver Grove Hts.	455-6900 "' "	'67 Ford '64 Ford '68 Ford '67 Ford '70 White	Y64-005 Y64-008 Y64-709 Y64-010 Y64-711
22	Berkman, J., Iron & Metal	637 Pine St.	227-6394	'68 Int.	Y19-188
23	Berkman, John dba Waste Control, Inc.	637 Pine St.	227-6394	'68 Int.	บ3236
24 25	11 11 11	11 11	# #	'70 Int. '68 Int.	Y37-431 U2308
26	11 11 11	. 11	* 1† 11	'58 Int.	Y19-188 U2300
27 28	11 11 11		11	'68 Int. '68 Int.	¥2293
29	31 tr 11	11	11	'68 White	U2299
30	11 11 11	11	H .	'68 White	U2298
31	11 11 11	ff s	†1	'62 GMC	U1007
32	17 17 17	· H	11	'68 Chev	Y65-469
33	11 11 11	II	11	'67 Ford	U2294
34	11 11 11	11	H	.70 Mack	U3431
35	11 11 11	11	. 11	'61 Ford	Y36-942.
78	Berquist, Kenneth	1045 Pleasant	225-2892	'67 Ford	Y16-529
19	Blaha, Anthony	875 Dayton	226-0743	'57 Ford	Y11-594

1971		Address	Telephone	Description	of True's
Licen 17	Bullock, James	3713 73rd St.	451-8947	'71 Ford	¥65480
		Inver Grove Hts.			·
80	Brown, Earl E., Jr. dba E-E Trucking	327 CASÉ AVE	774-6916	'53 Dodge	¥2534
104	Carey, Dick dba Econ-O-Haul Refuse	323 Case Ave.	771-4070	'63 Int.	Y1061
21	Carey, Thomas dba Carey Rubbish	3396 Afton Rd.	739-1221	'71 Int.	Y2783
110 111	Casanova, Walter & James dba Casanova Brothers	158 E. Sidney	224-1641	'63 Int. '66 Int.	Y33-619 Y7622
139 140	Cashill, James M. dba Cashill Disposal	668 S. Victoria	226-3371	'69 Ford '70 Ford	Y15-630 Y33-593
63	Cassell, Yuker	640 Iglehart	226-7487	'66 Int.	Y12-022
36	Cox, Johnny B. dba Johnny's Rubbish	884 Laurel	226-8491	'61 GMC	¥26303
98	Davis, Clyde V. dba C. V. Davis Rubbish S	962 Carroll Ave. ervice	646-6298	'70 Ford	YD-8740
42	Eggers, Edward dba Ed's Trucking	333 E. Lawson	771-1280	'60 Ford	¥9335
131	Farone, D. & Mertes,J. dba Jack-Doug's .	725 Simon and 195 E. Pascal	488 - 7869 226 - 5705	'61 Ford	YE1283
85	Friedl, James P. dba Jerry Carle Rubbish	1598 Hollywood Ct.	644-2084	'68 Int.	Y12146
176	Garcia, Matilda	475 N. Smith	224-7179	'70 Chev	Y17-559
179	Garcia, Faustino	307 E. Page	222-5408	'64 Chev	YX2939
177	Garcia, Ray	728 Oakdale	224-6632	'59 Int.	¥27638
66	Gerner, Ray	2517 James Dr.	739-8488	'67 Chev	YT8646
172	Gonzales, Vicente	1214 Lark Ave.	484-3803	'65 Chev	Y22-605
89	Gray, Willie D.	1036 W. Central	645-1844	'69 Int.	Y16-778
10	Gunderson, Walter	1267 Matilda	489-0502	1 FORD	YE 1217
5	Hammer, Ronald B. dba KarBens-Truck Serv.	2701 E. 12th Ave.N North St. Paul	777-7831	170 Ford	Y29-689
70	Hangge, Edward T. dba Ace Rubbish	2232 E. 6th St.	735-4514	'67 Chev	YX1700

197 Lice		Address	Telephone	Description	
44	Haugen, Gordon V. dba Haugen's Trash	1395 E. ARLINGTON 2988 Tanner o Lake Tanner y Luke	771-633/ -Dz .	67 CHEV 169 Chev	<i>y31-734</i> y81105
166	Heille, Gordon dba Trash Masters	1257 Palace	698-0606	'68 Ford	¥29-899
, 7	Hess, Fred C.	409 Ashland	225-5849	69 Chev	YE 8067
79	Horrigan, Jos. W.	321 E. Arlington	771-7413	'63 Chev	Y23-458
173	Humphrey, Vincen	965 Hague	645-3156	62 Ford	YY4827
117 118	Jansen, Ted Jr. dba Janco Hauling	452 St. Clair	222-6787	'67 Chev '66 Chev	YD8676 YV6849
74	Johnson, Charles E. dba Bellaire Sanitation	Rte. #3, Box 181 Stillwater, Minn.	426-2883	'67 Int.	Y22-817
72	Johnson, James S. dba J & J Rubbish	3904 McMenemy	429-6636	'54 Diam T	Y36-898
87	Kachel, Milton J. dba Mickey's City Wide	1450 Alaska	699-4401	'70 Chev	Y34-846
103 175	Karas, Ben dba Karas Trucking	1206 W. 60th St. Inver Grove Hts.	454-2120	'62 Chev '69 Chev	Y7807 YS1449
16	Kastner, Robert J. dba Twin City Rubbish Ret	1991 N. Kent moval	489-1283	'55 Int.	YD9909
130	Killian, Harvey dba Pete's Hauling	1179 Jackson	488-5940	'60 Ford	Y27-694
.105	Klang, Carl dba Carl's Rubbish	895 Birch St. Hugo, Minn.	484-4508	159 Fold 64 <i>CHE</i> V	¥22-456 YC 7847
125 126 127	Kowski, Ronald dba Kowski Rubbish ''''''''	1560 Oakdale West St. Paul	225-5338	'68 Ford '66 Ford '56 Int.	U-6454 Y28-602 Y35-735
148 149 150 151 152	Krawczewski, Ray dba Red Arrow ""	41 E. Chicago	224-2035	'54 GMC '62 Chev '66 Chev '62 Mack '68 White	Y15-631 Y15-633 Y15-630 Y15-632 U6451
38 39	Krause, Franklin A. dba Krause Rubbish Servic	716 James ce "	226-2549	'65 Chev '65 Chev	Y16-643 Y35-094
108 109	Krupenny, Donald dba Krupenny Disposal	825 Brown	227-3523	'66 Dodge '70 Ford	Y23-108 Y99-126
137 138	Lambert, Joe dba Truck Crane Service	213 2nd St., S.E. Minneapolis, Minn.	338-6991	'66 Mack '65 Ford	บ3747 บ3257

1971 Licen		Address	Telephone	Description	of Truck
40 41	Logen, Geo. Allen Jr. dba Logen Rubbish Hauling	1320 Marshall	644-7902	'70 Ford '71 Ford	Y29-510 U3247
114 115 116	McKnight, Harry	640 4th Ave., S. South St. Paul	451-0977	'70 Chev '62 Chev '66 Chev	Y19-859 Y65-202 Y65-201
182	McPhillips, Mike	85 W. Water	774 - 2870	'56 Ford	Y15-673
90 91 92 93 94 95	Meredith, Dean O. dba Haul-A-Way System	1482 Taylor 364 Larch (Office)	644-1339	'67 Ford '69 Int. '69 Ford '69 Chev '70 Mack '66 GMC	YN7487 U2535 U2536 U2537 U3193 U3211
77	Mudek, John C. dba Mudek Hauling	1520 Ames	771-4792	'69 Ford	¥27~535
101	Mudek, John P. dba Sanitary Hauling	1515 Ames	776-1183	'70 Ford	¥7654
65	Neumann, Harold C. dba Capitol City Disposal	1841 E. Maryland	771-9504	'70 Int.	Y32-670
2 3 4	Nitti, James	6639 Concord Blvd. Inver Grove Hts.	451-1421	'61 Chev '69 Chev '71 Chev	Y7465 Y7464 Y37-617
76	Nurnberg, Charles O. dba Nurnberg Trucking	877 Tuscarora	226-1900	'59 Chev	Y15-049
145	Oehrlein, Ben	9091 Concord Blvd. South St. Paul	451-1145	'65 Chev	Y65-053
184	Oehrlein, Ben	16 Heights		'71 Chev	X33-275
97 183	Oehrlein, Edward dba G & D Hauling	708 Watson	225-3326	'69 Chev '71 GMC	Y24-513 U6477
100 178	Oehrlein, Emil dba Highland Park Sanitati	1800 Century	459-3093	'69 Ford '71 Ford	Y63-593 YF3142
81	Olson, Roland Dean	1009 Jenks	774-1852	'62 Int.	Y29-532
22	Omaha Iron Metal, Inc. (Berkman - Levy)	85 S. Wabasha 637 Pine (Office)	227-6394	'68 Int.	Y19188
128	Osberg, Kenneth	1223 Juno	698-1421	'69 Ford	Y96-868
141	Oster, Marvin G. dba Marv's Rubbish Service	2785 Pilot Knob Rd.	454-1773	'69 Ford	¥65-903
144	Oxford, George	2305 Linwood Ave.E.	739-8611	'67 Int.	Y20-380

. 1971					
Licen		Address	Telephone	Description	of Truck
96	Paul, Alvery	ll67 Woodbridge	489-0800	'64 Chev	Y9945
153 154	Plant, Joseph & James dba Plant Brothers	385 E. Page	222-1049	'68 Ford '71 Dodge	Y28-969 YA16-783
99	Rapid Kleen Disposal Inc. (Homich & Biagini)	1660 E. 7th St.	774-375 8	'71 Ford	Y36- 567
11	Rauschnot, Frank dba Rauchsnot-Rubbish Rem	9985 Barnes Ave.E. oval, So. St. Paul	454-6737 ·	'68 Int.	Y69-094
180 181	Remackel, Frank	547 St. Lawrence	774-9936 226-0811	'69 Chev '63 Chev	Y29-499 Y29-498
67 68	Remackel, John J. dba J. J. Remackel & Sons	1087 Edgerton	771-2423	'69 GMC '68 Chev	Y12-858 Y16-354
69	Remackel, John J.	1027 Jessamine	776-4837	'70 GMC	U1230
146 147	Rivet, William dba Rivet Transfer	1373 Scheffer	698-7572	'67 Int. '66 Chev	Y59-783 YS-9784
171	Rusthoven, Jay dba Nomad Equip. Service	415 Marshall	226-8311	'60 Ford	YY5167
143	Rychlicki, Charles dba Chuck's Hauling	614 Farrington	488-2371	65 IN. 71 CHEV	YE 2188
18	Sadowski, Frank J. dba Frank's Trucking	147 E. Annapolis	225-7492	'52 Ford	Y63-580
. 45 46	Space Center, Inc.	444 Lafayette Rd.	222-7792	'60 Int. '63 Leach	U2863 YZ5428
47	t)	11	11	'63 Leach	YZ5427
48	11	* II	11	'64 Trail- mobile	YZ3968
49	n ·	TT.	н	'63 Leach	YZ5426
50	11	, III	11	'64 Leach	YZ5425
51	H	. 11	H+ .	'62 Hiway	YZ5424
52		11	ri .	'65 Trail- mobile	YZ3969
53	m .	tt	11	'65 Trail- mobile	UZ2022
54	11	11	11	'65 Leach	YZ9872
55	n		£ †	'66 Leach	YZ9873
±56	11	ti	tt	'66 Leach	YZ9874
57	11	. 11	11	'67 Leach	YZ8948
58	11	11	н	'69 Homemade	:
59	11	·	11	Trailer '68 Load-	YZ36768
	***	**		Master	YZ5080
60	•	11	11	'62 Int.	Y21862
61	11 11		*1	'63 GMC	Y3169
155	,,	. "	11	'68 Homemade Trailer	YZ1019

1971 Licen	se <u>Name</u>	Address	<u>Telephone</u>	Description (of Truck
119 120	Saloka, Bert	2776 N. Helen St. North St. Paul	777-8448	'71 GMC '71 Chev	YA33-346 YE2091
62	Saver, Kenneth P. dba Saver's Trucking	1307-6th Ave. S. South St. Paul	451-3036	'70 Chev	Y65-496
113	Smith, Glenn	Rte. #2, Box 56 Stillwater, Minn.	439-1418	'68 Chev	TA-4315
112	Sherrard, James dba Dependable Service	1062 Forest	774-7317	'65 Dodge	Y29-472
37	Slayton, Homer T. dba Slayton Trucking	159 E. Isabel	224-8045	'56 Chev	Y29-002
107	Splichal, George	1269 Scheffer	699-2127	'65 Chev	YE1802
72 月 7/ 月	Souter, D.F. & Vanella, J. dba Action Rubbish	1158 Stryker	224-2695	7/ Ford 65 Chev.	4 6763 111-766 464-467
84	Spores, Loring dba Spore's Trucking	2228 E. 6th St.	735-2073	'70 Chev	YE2008
1	Stone, George	2253 Stewart	698-8533	'67 Chev	Y3020
129	Toth, Jack N. dba Jack's Trucking	618 Joy	225-6230	'65 Chev	Y13-351
12	Traynor, George dba Mit-EE-Kleen	82 W. Robie	224-9936	'60 Ford	Y01547
15	Troje, Dennis J. dba Troje's Trash Pickup	4525 Barbara Ave.E. Inver Grove Hts.	451-6529	'69 Chev	Y63-631
18	Tyuse, Vanderbilt	574 Fuller	225-3428	'66 Ford	YS9663
102	Van Den Boom, Leonard dba Van's Rubbish	170 W. County Rd. B Roseville	489-3345	'69 Ford	Y9949
8 9	Vaske, George	1591 E. Hoyt	774-0916	'62 GMC '67 Chev	YU-3187 Y16-557
121 122 123 124	Walter, John dba Walter's Disposal Service	2930 101st Ave.NE Minneapolis, Minn.	784-5213	'71 Ford '69 Ford '70 Ford '70 Ford	U5200 U3625 YI4131 U5882
64	Wegleitner, Eugene dba Gene's Disposal Servic	2048 McMenemy Rd.	774-1033	70 Int.	YA6700
13	Wegner, Charles A. dba Dispos-O-Waste	1400 Searle	774-0009	'69 Int.	YU5237
83	Weinzettel, Jacob dba Mendota Hts. Rubbish	Box 120, Rte #1 Farmington, Minn.	454-4636	'65 Int	¥2679

1971 Licen		Address	Telephone	Description	of Truck
167	Weme, Sivert H., Jr. dba Fragrant Trucking	416 Bloom	429-0444	'69 GMC	U1026
106	Wiley, Merrian dba Wiley Trucking	492 W. Co. Rd.B	484-4180	'65 Ford	¥2487
86	Williams, Richard dba Williams Trucking	1024 Bush	774-0119	'69 Ford	¥4540
20	Woodbeck, Walter dba Sunny's Trucking	1219 Eugene St. White Bear Lake	429-6378	'66 Chev	YV3992
156 157 158 159 160	Wybierala, Richard dba Poor Richard's	820 Clark	774-1313	'70 Int '58 Int '67 Int '68 Chev '67 Int	Y18857 YD6338 U2832 Y29-525 Y29-599
161	11 (1	11	" LSCHEV		********* /2 7
162	11 II	11 11	11	'64 Chev	YX1374
163 164	11 11	11	"	'67 Chev '60 Chev	Y29-598 Y29 - 593
142	Wynne, John J. dba Wynne's Rubbish Remo	785 E. Jessamine val	774-8386	'65 Ford	YA8430
	NEW LICENSES SINCE LIST	WAS COMPILED			,
185 186	Gray, Willie D. Littlefield, J. Tschida,	1036 W. Central Ron	645 - 1844	'64 Ford	Y11;-870
187	dba Jack& Ron's Rubbish Shobe, D. & Son		226 - 7475	'56 Ford	Y28 - 980
201	dba Disposal Serv.Inc.	Brooklyn Park, Minn.	425-5511	'70 White	U 5416
188	Kachel, Milton J. dba Mickey's Wide	1450 Alaska	699 <u>-</u> 1410I	'71 Chev.	Y38 - 916
189	Brennan, William G.	1213 Hague	644-4543	'62 Int.	¥35 - 774
190 191	American Systems, Inc. American Systems, Inc.	63 So. Robert 63 So. Robert	228-4182 228-4182	'65 Int. '70 Ford	Y29 - 524 Y33 - 947
196	Atlas Disposal Service,	Inc. 228 Master St. Savage, Minn.	890 – 1372	70 Dodge	U 4565
192 193	Disposal Systems, Inc. Disposal Systems, Inc.	915 No. Albert 915 No. Albert	645 - 6907 645 - 6907	'62 Int.	U 3293 Y13 - 506
194 195	Six Transfer Company Six Transfer Company	2334 University 2334 University	645 - 7613 645 - 7613	'58 Mack '53 Mack	Y12 - 591 Y37 - 849

MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY DIVISION

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ž į	850) ARCAD	E STRE						ST. PAU	L, MI					5	5106
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INDUSTRY X STATE PE	RINCIPAL	PRODUCT	НОМ	Œ APPI	IANCES					PRIN	CIPAL METHOD O	F COMBUS	STIBLE REF	USE DIS	POSAL	
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MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY DIVISION

BOILER INFORMATION

	الشنسد		BOILER INFORMATION											
		DATE OF	RATED		FIRING RATE			MET		TYPE	CUI FUR	ASH	BTUPER	501LE;
MANUFACTURER'S NAME	AΡ	NSTALLATION	INPUT	QUANTIT	TY/HOUR	QUAN./YEAR	UNITS	1		OF FUEL]		LB., GAL.,	EXHAUS, VOLUM
		MO YR.	(2)	NORMAL	PEAK	AVERAGE FOR YEAR	(3)	1		(5)	*	7,	CU. FT.	- (SCFM)
	19	20-25	26-31	22-37.	38-43	44-51	5.2	53	54	5.5	56-57	58-60	61-65	67-72
RICAN STANDARD	 	8-62	2,050	1,025	2,560	2,484	1			1			1,000	14
DIATOR			2,050	1,025	2,560	161	2			2	1.2		140,000	11'
LAVER BROOKS		8-67	76,960	50,000	76,960	113,727	ı			1			1,000	10,42
			72,260	57,500	72,260	3,300	2			6	3.0	.15	153,000	7,25
													·	
ON IRON WORKS		4-47	28,700	19,500	28,700	22,429	1			1	,		1,000	4,07
			28,900	19,300	28,900	562	2			6	3.0	.15	153,000	2,45
EY STOKER CORP.		8-47	31,100	22,200	31,100	46,797	1			1			1,000	4,52
			31,400	22,600	31,400	796	2			6	3.0	.15	153,000	2,84
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	IATOR AVER BROOKS ON IRON WORKS EY STOKER CORP.	RICAN STANDARD IATOR AVER BROOKS ON IRON WORKS EY STOKER CORP.	MANUFACTURER'S NAME AP INSTALLATION MO YR. 19 20-25 RICAN STANDARD 8-62 IATOR AVER BROOKS 8-67 ON IRON WORKS 4-47 EY STOKER CORP. 8-47	MANUFACTURER'S NAME AP	MANUFACTURER'S NAME APP NSTALLATION MO YR. (2) RICAN STANDARD 8-62 2,050 1,025 AVER BROOKS 8-67 76,960 57,500 ON IRON WORKS 4-47 28,700 19,300 EY STOKER CORP. 8-47 31,100 22,600	MANUFACTURER'S NAME Part	MANUFACTURER'S NAME Notality Normal Normal Peak Average For year	MANUFACTURER'S NAME Part	MANUFACTURER'S NAME Note	MANUFACTURER'S NAME	MANUFACTURER'S NAME P NSTALLATION MO YR. 12) QUANTITY/HOUR QUAN./YEAR MORMAL PEAK PEA	MANUFACTURER'S NAME A	MANUFACTURER'S NAME Part Normal Normal	MANUFACTURER'S NAME Normal Peak Average Filling Super Sup

FOOTNOTE (2) REPORT AS THOUSAND BTU/HOUR

FOOTNOTE (3) 1-CU. FT. IN THOUSANDS 2-GALS. IN HUNDREDS 3-TONS OF COAL 4-TONS OF WOOD 5-OTHER

FOOTNOTE (4)

IN COL. 45 1-SPREADER STOKER 2-PULVERIZED 3-TRAVELING GRATE

4-UNDERFEED 8-OTHER

IN COL. 46 O-WITHOUT FLYASH REINJECTION 1-WITH FLYASH REINJECTION

FOOTHOTE (5)

1-GAS

2-01L #2 3-01L #3 4-01L #4

6-01L #6 7-REFINERY BOTTOM

5-01L #5 0-WOOD

8-ANTHRACITE 9-BITUMINOUS

PERSON PREPARING REPORT (SIGNATURE & TITLE)

FACILITIES ENGINEER

October 22, 1970

MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY DIVISION

INCINERATOR INFORMATION

ò .					INCINERATO	R INF	DRMATION						
) 09 10 10 10	FC	2-13						•			•		
INCIN: ERATOR IDENT:	NO. OF UNITS	MANUFACTUREN'S NAME	CODE	ΑP	DATE OF INSTALLATION	CLASS	RATED CAPACITY (LBS/HOUR)	BTU/LB AS FIRED	TÝPE WASTE	DAILY AMOUNT (LBS)			INCINERAT EXHAUS VOLUME (SC
14-16	1718		19-20	21	22+27	28	29-34	95-40	41	42-48	47		149-531
		NO INCINERATOR EQUIPME	VT.										
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PERSON PRI	EPARING	REPORT (Signature & Title)	<u>kiriki i i i i i i i i i i i i i i i i i</u>	DATI	É				· L				

Elistaturg FACILMES ENGINEER.

October 22, 1970

80	5	. fc - 2-13				PROCESS INFO	RMATION				
00608		PROCESS OR OPERATION EXH CONTAMINANTS TO THE ATM				MATERIALS AT PRO	PROCESSED OR CESS OR OPERA	PRODUCED TION			=
3.5	いしいひこう				DATE OF		QUAN	TITY	QUAN./YEAR	UNITS	PROCE EXHAU COLUME:
	OF UNITS	NAME OR TYPE OF PROCESS OR OPERATION	CODE	Ar	MO YR.	TYPE OF MATERIAL .	NORMAL	PEAK	AVERAGE FOR YEAR	(1)	
14-15}	17-18		19-23	2.4	25-30		31.35	25-40	41-48	42	20-5
	ı	Department 3 Paint Shop									
***	1	Metal Preparation Washer			7-47	Bonderizing				-	4,600
	1	Waterwash Spray Booth			10-58	Paint & Solvent	s)				18,200
	1	Waterwash Spray Booth			10-58	Paint & Solvent	s)			_	17,000
	1	Paint Baking Oven Exhaust			10-58	Paint & Solvent	s) 75	150	35,000	l i	1,300
	1	Dryer Exhaust			1-71	Paint & Solvent	s)				24C
	1	Washer Dryer Exhaust			7-47	Paint & Solvent	3)				1,600
	4										<i>.</i>
		Department 4									30
	1	Ice Cube Foam Area Exhaust			8-62	Polyurethane	4	8	1,600	1	7,000
	1	2nd Floor South Building			8-62	Polyurethane		:			500
	1	Curing Oven			8-62	Polyurethane	·				
) (A.							
											· .
FOCTNO		NDS/HOUR 3 - GALLONS/HOUR S/HOUR 4 - CUBIC FEET IN THOUSANDS/HOUR		E.	W. Hartung	EPORT (SIGNATURE & TI	TLC)	DATE S-	-3071		

60	5	f c 2-13				PROCESS INFO	RMATION				
60900		PROCESS OR OPERATION EXP					S PROCESSED OR OCESS OR OPERA				<u></u>
3.5	NUMBER				DATE OF		QUA'	NTITY	QUAN./YEAR	UNITS	PROCE EXHAL S VOLUME :
	OF UNITS	NAME OR TYPE OF PROCESS OR OPERATION	CODE	AP	MO YR.	TYPE OF MATERIAL .	NORMAL	PEAK	AVERAGE FOR YEAR	(1)	1
14-15	17-18		10-23	2.4	25-30	1	31-35	26.40	41-48	49	: 50 - 5
	. 1	Department 5 Foam Area									
***A	1	Foam Curing Oven Exhaust			8-63	Polyurethane					1,600
	1	Foam Curing Oven Exhaust			8-63	Polyurethane					1,300
	ı	Fcam Curing Oven Exhaust			8-63	Polyurethane					5,100
	<u>1</u>	Foam Curing Oven Exhaust			8-63	Polyurethane					5,100
	1	Foam Burner Oven Exhaust			8–63	Gas Combustion					800
		Foam Burner Oven Exhaust			8-63	Gas Combustion					2003
	1	Foam Booth Exhaust			€-63	Polyurethane	1,000	3,000	500,000	1.	7,600
W. W. W					÷						7.
								•		,	
	1								-		
FOCTHO		UNDS/HOUR 3 • GALLONS/HOUR		PERS	SON PREPARING R	REPORT (SIGNATURE & TI	ITLE)	DATE	<u></u>		· ,
		NOS/HOUR 3 GALLONS/HOUR NS/HOUR 4 CUBIC FEET IN THOUSANDS/HOUR	1	E	. W. Hartung acilities En	igineer		6	6-30-71		

01	5	fc: 2-13				PROCESS INFO	RMATION				
00610		PROCESS OR OPERATION EXH CONTAMINANTS TO THE ATMO			•		PROCESSED OF CESS OR OPERA				;= ,
P S	NUMBER				DATE OF		AUP	1TITY	QUAN./YEAR	אודי	PROCE EXHAU FOLUME:
	OF UNITS	NAME OR TYPE OF PROCESS OR OPERATION	CODE	Αρ	MO YR.	TYPE OF MATERIAL	NORMAL	PEAK	AVERACE FOR YEAR	(1)	VOLUME.
14 ;5	17-18		10-13	0.24	25-30		31.35	26.40	41-48	49	50-5
		Department 6 Porcelain Shop									
	1	Metal Preparation Washer(Entrance	γ		10-56	Water Vapor					7,700
	1	Stipple & Paint Dryers			8-65	Gas Combustion					1,100
	. 1	Porcelain Enameling Furnace			8-65	Gas Combustion					19,300
	1	Passivating Area			8-65	Water Vapor					12,700
	1	Metal Preparation Washer (Exit)			10-56	Water Vapor					
	11	Dryer Exhaust		V. C.	10-56	Gas Combustion					
	1	Porcelain Stipple Booth			8-65	Porcelain Frit					
	1	Paint Spray Booth			8-65	Porcelain Frit	150	400	1,000,000	,	.,
	1	Paint Spray Booth			8-65	Porcelain Frit		·			
		·		 			·	:			
										1	
						·					
										1	1:
FOCTHO		NDS/HOUR 3 - GALLONS/HOUR S/HOUR 4 - CUBIC FEET IN THOUSANDS/HOUR		PER	on PREPARING R E. W. Hartur Facilities E	EPORT ISIGNATURE & TI E ngineer	TLE)	DATE 6-	30-71		

	5	. fc			÷	PROCESS INFO	RMATION				
006		PROCESS OR OPERATION EXH CONTAMINANTS TO THE ATMO					S PROCESSED OR OCESS OR OPERA				=
35	NUMBER				DATE OF		4AUQ	NTITY	QUAN./YEAR	UNITS	PROCE EXHAL S VOLUME :
	OF UNITS	NAME OR TYPE OF PROCESS OR OPERATION	CODE		MO YR.	TYPE OF MATERIAL	NORMAL	PEAK	AVERAGE FOR YEAR	(1)	1000,72
14 ;5	17-18	1	10-23	24	25-30	<u> </u>	31-32	36-40	4.1 - 4.8	49	\$9-1
		Department 7 Paint Shop			1].		
2.X.4.X.	1	Metal Preparation Washer	_		7-49	Bonderizing					17,400
	1	Waterwash Spray Booth	_		7-49	Paint & Solven	its)				12,000
	1	Waterwash Spray Booth			. 1	Paint & Solvent	its)				8,700
	1	Waterwash Spray Booth			7-49	Paint & Solvent	its)				9,700
		Waterwash Spray Booth			7-49	Paint & Solven					12,700
*****	1	Waterwash Spray Booth		1	7-49	Paint & Solvent	.ts)				13.40X
***************************************	1	Waterwash Spray Booth			7-49	Paint & Solvent	nts) 150	300	62,500	1	10,100
	1	Waterwash Spray Booth			7-49	Paint & Solvent	143)				6,300
	1	Waterwash Spray Booth			7-49	Paint & Solvent	ts)	•			13,40
	1	Waterwash Spray Booth		A		Paint & Solvent	.48)	:			13,40
	1	Dry Spray Booth			7-59	Paint & Solvent	its)				11,400
	1_1_	Dry Spray Booth			7-59	Paint & Solven	its)				13,20
	1	Paint Baking Oven Exhaust			•)	Paint & Solven	14a)) 140	60	12,500	1	14,000
		Paint Baking Oven Exhaust			7-49	Paint & Solvent					9,200
FOCTNO	1 - POUR	INDS/HOUR 3 - GALLONS/HOUR IS/HOUR - 4 - CUBIC FEET IN THOUSANDS/HOUR		E.	on PREPARING RE . W. Hartung acilities Eng		TLE)	DATE 6-	5-30-71		

2	5	<i>fc</i> 2-13				PROCESS INFO	RMATION				
00612		PROCESS OR OPERATION EXH CONTAMINANTS TO THE ATMO					PROCESSED OR CESS OR OPERA				== !
O E35	NUMBER				DATE OF		ИАИО	ITITY	QUAN./YEAR	UNITS	PROCES SUAHXE VOLUME (SC
	OF UNITS	NAME OR TYPE OF PROCESS OR OPERATION	CODE	AP	MO YR.	TYPE OF MATERIAL .	NORMAL	PEAK	AVERACE FOR YEAR	(1)	4250WE 120
14-15	17-18		10-13	:1	25-30		31.35	36.40	41-48	49	50 - 55
		Department 12 - Paint Shop									
	ı	Metal Preparation Washer			8-60	Bonderizing					3,500
	1	Waterwash Paint Spray Booth(East)		8-60	Paint&Solvents)					16,400
	1	Waterwash Paint Spray Booth(West			8–60	Paint&Solvents)	70	150	25,000	1	6,300
	1	Electrostatic Paint Spray Booth			8-60	Paint&Solvents)					5,800
	1	Paint Baking Oven Exhaust			8-60	Paint&Solvents)	30	60	10,000	1	5,300
	1.	Oven Burner Exhaust			8-60	Gas Combustion)					2,400
* * * * * * * * * * * * * * * * * * * *	1	Paint Room Exhaust			8-60	Paint&Solvents			ļ.		1,900
											1,5
								•		,	
								1			
											۲.
FOCTHO		IDS/HOUR 3 - GALLONS/HOUR		PER	ON PREPARING R	EPORT (SIGNATURE & T)	TLEI	DATE			
	1 - POUR 2 - TONS	·			W. Hartung cilities En	ginee r		6-30-	71		

<u>e</u>	'5	je. 5-13				PROCESS INFO	RMATION				
00613	-	PROCESS OR OPERATION EXH CONTAMINANTS TO THE ATM					S PROCESSED OR OCESS OR OPERA				<u> </u>
5 3	NUMBER				DATE OF		ALUP	NTITY	QUAN./YEAR	UNITS	PROCES UAMX3 S VOLUNG S
	OF UHITS	NAME OR TYPE OF PROCESS OR OPERATION	CODE	AP	MO YR.	TYPE OF MATERIAL	NORMAL	PEAK	AVERACE FOR YEAR	(1)	VOCOWE !
14:5	17-18	·	15-23	2.4	25-30		55-35	26.40	41-48	49	50 - 5
		Building 30									
	1	Paint Spray Booth			6-55	Paint & Solvents	,\$		·		11,000
	1	Boiler Stack			10-50	Gas Combustion					
	1									,	
	1	Solder Exhaust			8-61	Gas Combustion 95-5 Solder					8,000
	1	Asphalt Dipping Exhaust			8-56	Korite O	·				11,200
******	1	Asphalt Tank Exhaust			8-56	Korite O					
******	1	Asphalt Heater Exhaust			8-56	Gas Combustion					34
								•			
		·		A				:			
									·		
					.**(: .
	1									T	· .
FOCTNO	TE (1)		<u> </u>	PERS	ON PREPARING R	REPORT (SIGNATURE & TI	ITLE	DATE			<u> </u>
	1 - POUN 2 - TONS	ND5/HOUR 1 - GALLONS/HOUR 5/HOUR - 4 - CUBIC FEET IN THOUSANDS/HOUR		!	E. W. Hartun Facilities E	ig Engineer		6-30-	-71		

FC

MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY DIVISION

COLLECTOR AND EMISSION INFORMATION

	3	TYPE AND	D EFFICIENCY OF AIR CL	.EANIN	G EQUIPMENT	<u></u>			DUS	ST, FUMES, GAS, E	TC. EMITTED	1		STA	ACK INFORMA	ATION
REF.	1 2	OURCE OF	MANUFACTURER'S	CODE	DATE OF	TYPE	OPER. EFF.	TYPE	CODE		OUNDS PER HOUR	BASIS	HEIGHT ABOVE	DIA.	STACK TEMP.	EXHAUST A
	C	INPUT	MODEL NUMBER		MO YR.	(6)	*		, , , , , , , , , , , , , , , , , , ,	NORMAL	PEAK	(7)	GRADE (FT)	(FT)	(DEG. F)	(SCFM)
14-16	17	 '		18-20	21-25	77	/ 28-30	1	31-33	14-15	40-45	₹.6	47-49	50-51	52-55	55-51 c
		ept. 3	Paint Shop													
***************************************	P		Metalwash		7-47			Water Vapor					50	1.5 X 2		4,600
***************************************		pray Sooth	R. C. Mahon		10-58			Paint & Solvents	5)			50 2	2-2/3		18,200
	В		R. C. Mahon		10-58			Paint & Solvents	s) 43		5	50	2-5/6		17,000
	(E)	ven Exhaust	R. C. Mahon		10-58			Paint&Gas Bolvents)			50	1		1,300
	D E	ryer Xhaust	R. C. Mahon		1-71	'		Gas Comb					50	1		240
		lasher-I Exhaust	Pryer R. C. Mahon		7-47	<u> </u> '		Water &					50	1-2/3		1,600
		· · ·				<u> </u>								ļ ,		
	D)epartme	ent 4		<u> </u>											8
	E	oam Are Exhaust			8-62			Polyure	4.	4	8	5	50	2-1/3		7,000
	E	Foam Ara Exhaust			8-62	<u> </u>		Polyuro	Q.				50	1		500
		Curing Oven		-	8-62			Polyure	₫•				50	<u> </u>		
						<u> </u>								<u>.</u>		
		FOOTH	OTE (6)				FOOTN	NOTE (7)		PER	SON PREPARING RE	EPORT (S	IGNATUR	E A TITLE	DATE	

1-SETTLING CHAMBER
2-CYCLONE-HIGH DRAFT LOSS
3-CYCLONE-LOW DRAFT LOSS
4-SCRUBBER-HIGH DRAFT LOSS
5-SCRUBBER-LOW DRAFT LOSS

6-ELECTROSTATIC
PRECIPITATOR
7-FABRIC COLLECTOR
8-CONDENSER
9-INCINERATOR

2-13

1-STACK TEST (DEPT. OF HEALTH)
2-STACK TEST (COMPANY)
3-STACK TEST (OTHER)
4-MATERIAL EALANCE
5-EMISSION FACTOR ESTIMATE
6-OTHER MEANS

- ---

E. W. Hartung Facilities Engineer

MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY DIVISION

COLLECTOR AND EMISSION INFORMATION

00615	тc	1	FC	2-13						COL	LECTOR AND E	O1221ME	N INFO	RNATIC	N	
		TYPE ANI	D EFFICIENCY OF AIR GI	LEANIN	IG EQUIPMENT				DUST	T, FUMES, GAS,	, ETC. EMITTED			ST;	ACK INFORM	ATION
	EF. CODE W	SOURCE OF	MANUFACTURER'S NAME AND MODEL NUMBER	ados	DATE OF INSTALLATION MO YR.	TYPE (6)	OPER. EFF.	TYPE	CODE	QUANTITY P	POUNDS PER HOUR	BASIS OF EST. (7)	HEIGHT ABOVE GRADE (FT)	DIA.	STACK TEMP. (DEG. F)	EXHAUST VOLUME (SCFM)
-	14-16.1	위 기		18-20	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	27	/28-50	a	31-33	94-59	40-25	4.5	47-46	50-51	52-55	5e-610.000
***************************************		Dept. 5	Foam Area													
			Lanly		8-63			Polyure.	•				45	1.5 x 1-2/3		1,600
\$ \$		Curing	II		8-63		<u>.</u>	Polyure.	•			ļ	45	1-1/2		1,300
		Curing Oven	tı .		8-63	<u> </u>		Polyure.	,			ļ	45	1-5/6	ļ	5,100
		Curing Oven	. 11		8-63			Polyure.	•			ļ	45	1-5/6 1-5/6	x	5,100
;		Burner	11		8-63			Gas Comb.					60	1_1		800
4		Burner Oven	11		8-63			Gas Comb.					60	1		800
		Foam Booth	11		8-63			Polyure.	•	1,000	3,000	5	35	2-1/3 2-1/3	×	7,600
						ļ								<u></u>		
•						ļ				 		ļ	ļ	ļ		
; ;																
						-	ļ ·			 		<u> </u>		<u> </u>		
						<u> </u>	-			 		<u> </u>				
Ŷ																1.
		1-SETTLING CHAMBER 6-ELECTROSTATIC 1- 2-CYCLONE-HIGH DRAFT LOSS PRECIPITATOR 2- 3-CYCLONE-LOW DRAFT LOSS 7-FABRIC COLLECTOR 3- 4-SCRUBBER-HIGH DRAFT LOSS 8-CONDENSER 4- 5-SCRUBBER-LOW DRAFT LOSS 9-INCINERATOR 5-						NOTE (7) ACK TEST (DE ACK TEST (CO ACK TEST (CO ACK TEST (OT TERIAL BALA ISSION FACTO HER MEANS	OMPANY THER) ANCE	FHEALTH)	E. W. Facili	Hartw	ing			30-71

AIR QUALITY DIVISION

COLLECTOR AND EMISSION INFORMATION

7	2007 0016	8	FC	2-13				•		COL	LECTOR AND E	MISSIO	N INFO	RMATIO)N	
			D EFFICIENCY OF AIR CL	EANIN	IG EQUIPMENT				DUS	T, FUMES, GAS,	ETC. EMITTED			STA	CK INFORM	ATION
_	F. CODE	SOURCE C.	MANUFACTURER'S	CODE	DATE OF	TYPE	OPER.			QUANTITY PO	OUNDS PER HOUR	BASIS	HEIGHT	INT'L.	STACK	EXHAUST :
		C	NAME AND MODEL NUMBER		MO YR.	(6)	7.	TYPE	CODE	NORMAL	PEAK	EST. (7)	GRADE (FT)	AT TOP	TEMP. (DEG. F)	VOLUME (
	14-16	17		19-20	10月2月2月26日(日)	27	/ 28-50		31-33	34-39	40-45	45	47-45	50-51	52-55	56-61- /: \s
		Dept. 6	Porcelain Shop											ļ ,		
		Metal Prep.Ex	it Metalwash		10-56			water Vapor					60	1-1/4 x 2		7,700
-		Metal	it Metalwash		10-56			Water Vapor					60			
4		Dryer Exhaust	Binks		10-56			Gas Comb.		· · · · · · · · · · · · · · · · · · ·			60			
		Stipple	11		8-65			Porc.		`				3.5		
4		Booth Spray	11		8-65			Frit Porc.) 150	400	5	45	3.5		
		Booth Spray	n		8-65			Frit Porc.)	400	2				
		Booth Stipple			8-65			Frit. Gas				-	45	2-2/3		1,100
3		Dryer Cham.						Comb. Gas						† 	<u> </u>	
		Furnace	Lindberg		8-65	<u> </u>		Ccmb,	-				45	3.5	280	1.9,300
		Passiva Aroa	ing		8-65			Water Varor		·		ļ	60	2-5/6		12,700
															<u> </u>	
			·													
-																
-		5007	ore (c)	********	·!	L	50071	<u> </u>	1		2001 525 51 5115 51			<u></u>		<u> </u>

FOOTNOTE (6)

1-SETTLING CHAMBER 2-CYCLONE-HIGH DRAFT LOSS 3-CYCLONE-LOW DRAFT LOSS 4-SCRUBBER-HIGH DRAFT LOSS 5-SCRUBBER-LOW DRAFT LOSS

6-ELECTROSTATIC PRECIPITATOR 7-FABRIC COLLECTOR 6-CONDENSER 9-INCINERATOR

FOOTNOTE (7)

1-STACK TEST (DEPT. OF HEALTH) 2-STACK TEST (COMPANY) 3-STACK TEST (OTHER) 4-MATERIAL BALANCE S-EMISSION FACTOR ESTIMATE GOTHER MEANS

PERSON PREPARING REPORT (SIGNATURE & TITLE) DATE

E. W. Hartung Facilities Engineer

2-13 FC

COLLECTOR AND EMISSION INFORMATION

		D EFFICIENCY C	OF AIR C	LEANIN	G EQUIPMENT	نظيمة			DUS	ST, FUMES, GAS,	, ETC. EMITTED			ST/	ACK INFORMA	ATION
REF. CODE M		NAME A	AND	CODE		TYPE (6)	EFF.	1	CODE	=	POUNDS PER HOUR	BASIS OF EST.	HEIGHT ABOVE GRADE	DIA.	STACK TEMP.	EXHAUST VOLUME
),	33	MODEL NU			MO YR.	1	7.	,	(managed)	NORMAL	PEAK	(7)	(FT)	(FT)	(DEG. F)	(SCFM)
14-16 17	'' 	Paint Sh	hop	18-20		27	/ 28-30		31-33	36-39	40-45	65	27-25	50-51	52-55	56-61
	Metal			1	1	,		Water	10000000			1				
	Prep.	Dispatch	Co.		7-49	<u> </u>		Vapor	(managar))	<u>'</u>		65	3-1/6	<u> </u>	17,400
	Spray				1	,		Paint	(4				,	1	,
***************************************	Booth	. 11	11		7-49	<u> </u>		Solvent)			65	3.5	<u> </u>	12,000
	Spray	<u> </u>			1	1		Paint &		\overline{A}^{-}			1,5		1	1 0 200
	Booth	"			7-49	 '		Solvent					65	3.5	 '	8,700
***************************************	Spray	1	. #1		1 ~ 10	' '		Paint &	1 1	đ			65	5 5	1	0.700
***************************************	Booth	11			7-49	 '		Solvent		. 		+	1-02	3.5	 	9,700
	Spray	, n	31		1 710	' '	1	Paint &		A			65	2-5/6	1	12 700
***************************************	Booth				7-49	 '		Solvent:				 	02	K-2/0	 	12,700
	Spray Booth	n n	п		7-49	'		Solvent		. b			65	2-5/6	1	13,400
	Spray			-	1	1		Paint &		1				}	1	
	Booth	11	11		7-49	<u> </u>		Solvent	. 5	1)			65	2-5/6	1	10,100
	Spray			Timese)	1	'		Paint &	2	A						
***************************************	Booth	11	††		7-49	Ш.		Solvent		58	116	5	65	2-5/6	<u> </u>	6,300
	Spray			T	4	T '		Paint &		A		}_	Τ.	,	,	
	Booth	11	.11		7-49	<u> </u>	_	Solvant		_l			65_	3.5	<u> </u>	13,400
	Spray	1		lanning Harring	1	'	1	Paint &		A				· '	İ	
***************************************	Booth Bor	11-	- 11	Taken and the second	7-49	 '		Solvent Paint &	- (3000000)	·P			65_	3.5		13,400
	Dry Spr	ray "	i t		1 7 50	'				A			65	2-5/6		חסו בנ
	Booth Dry Spr	. 			7-59	+'	+	Solvent:		<i>}</i>		+	107	12-2/0	 	11,400
	Booth	ray	11		7-59	'		Solvent		1	1		65	2-5/6		13,200
***************************************	Oven			-		+	+	Solvent		A		+	+0-	K-3/v	1	1-13000
	Exhaust	- 11	it ·		7-49	. '		& Gaa Co	1	.			65	2-1/3	. }	14,000
	Oven			Time r		 		Solvent		<i>.</i> {		†	1	T	 	
	Exhaust		11	ļiidas. I	7-49	,	i	& Gas Co	A	Á			65	2-1/3	ļ	9,200
	FOOTNO					<u></u>	1	NOTE (7)	معستث	Pr	ERSON PREPARING RE	FPORT (hand hand
	1-SETT 2-CYC	TLING CHAMBER	RAFT LOSS	s i	-ELECTROSTATIC PRECIPITATOR		1-STA	ACK TEST (DE ACK TEST (CO	OMPANY	OF HEALTH)	Noon Francisco	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1000			

3-CYCLONE-LOW DRAFT LOSS 4-SCRUBBER-HIGH DRAFT LOSS 5-SCRUBBER-LOW DRAFT LOSS

7-FABRIC COLLECTOR 8-CONDENSER S-INCINERATOR

3-STACK TEST (OTHER)
4-MAYERIAL BALANCE
5-EMISSION FACTOR ESTIMATE GOTHER MEANS

E. W. Hartung Facilities Engineer

2-13 FC TC

COLLECTOR AND EMISSION INFORMATION

3		TYPE AND	EFFICIENCY OF AIR CL	EANIN	G EQUIPMENT	- t			Dus	T, FUMES, GAS, E	TC. EMITTED			STA	CK INFORMA	TION
≀E# 00 -	E X	SOURCE OF	MANUFACTURER'S NAME AND	CODE	· ·	TYPE	OPER. EFF.	TYPE	ÇODE	QUANTITY PO	UNDS PER HOUR	BASIS OF EST.	HEIGHT ABOVE GRADE	INT'L. DIA. AT TOP	STACK TEMP.	EXHAUST VOLUME
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1-SETTLING CHAMBER 2-CYCLONE-HIGH DRAFT LOSS 3-CYCLONE-LOW DRAFT LCSS 4-SCRUBBER-HIGH DRAFT LOSS 5-SCRUBBER-LOW DRAFT LOSS

6-ELECTROSTATIC PRECIPITATOR 7-FABRIC COLLECTOR 8-CONDENSER 9-INCINERATOR

1-STACK TEST (DEPT. OF HEALTH) 2-STACK TEST (COMPANY) 3-STACK TEST (OTHER) 4-MATERIAL BALANCE 5-EMISSION FACTOR ESTIMATE

PERSON PREPARING REPORT (SIGNATURE & TITLE) DATE

E. W. Hartung Facilities Engineer

MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY DIVISION

COLLECTOR AND EMISSION INFORMATION

TYPE AND EFFICIENCY OF AIR CLEANING EQUIPMENT

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3		TYPE AND	EFFICIENCY OF AIR CL	EANIN	G EQUIPMENT				ous	T, FUMES, GAS,	ETC. EMITTED			STAC	CK INFORMA	ТІОН
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	·	FOOTNO	TE (6)	**********		·	FOOTN	L DTE (7)		loc	RSON PREPARING RE	PORT IS	LONATUR	F A TITLE	DATE	
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			ONE-HIGH DRAFT LOSS ONE-LOW DRAFT LOSS		PRECIPITATOR FABRIC COLLECT	OR		CK TEST (CC CK TEST (OT		Y)	E. W. Har	tung			6-3	30-71
		4-SCRU	BBER-HIGH DRAFT LOSS BBER-LOW DRAFT LOSS	s e-	CONDENSER INCINERATOR		4-MAT	ERIAL BALA SION FACTO ER MEANS	NCE	IMATE .	Facilities	s Engi	ineer			

٠	PIG EYE LANDFILL	DCN: 00 020 = PAGES:
DATE: 7-1	4-71	SOURCE.
occinicals.	Vent Schonberger Joe Crea Memo re: CMSPRC's d	ra"naseditur.
SUMMARY:	conspesi drainage di	ton, I'll arantors
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PRP's	amorro	
TRANSPORT	TERS	
CODED BY ENTERED B	pp in	

* - - -

TO: Joe Crea

FROM: Kent Schonberger

DATE: July 14, 1971

SUBJECT: Milwaukee Railroad drainage ditch to Battle Creek at Pig's Eye Landfill

Mr. Johnson, who is the Roadmaster or District Engineer for the Milwaukee Railroad, was in to see Mr. Schnarr on some right-of-way matter recently and happened to mention to me, in the course of a conversation, that he seemed to think that that ditch which affords them a drainage outlet underneath that bridge on our roadway into the back end of Pig's Eye may be somewhat restricting the flow of water and backing it up higher than normal.

He says their outlet pipe, which must be at the extreme north end of the ditch, usually always used to be able to be exposed, but now it is underwater. He also said that the Railroad Company is going to do some cleaning out or reopening of the ditch bottom in the portion from their yard down to the wooden bridge. In connection with that, he asked if we could make an inspection of that ditch from the bridge southerly to its outlet into that lake area to insure whether our disposal or covering operations have in any way raised the invert of the flowage or caused any deposits in the ditch which would have the effect of backing up the flowage water in their portion of the ditch and/or causing more silting in that portion. I would appreciate your inspecting this and letting Don or me know at your convenience what is found. Thank you.

KS:ma DEN

SITE NAME: PIG EYE LAN	<u>DFILL</u>	DCN: OC	2621	
		≠ PAGES:		·
DATE. 8-4-71	· .	SOURCE:		
AUTHOR: JOSEPh RECIPIENT: Edward	F. Koening	COSTPA		
RECIPIENT: Edward	d Harryng	WHIRLP		
TITLE. LHW N.	e: WHILL HOPE	A/		
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PRP's WHRIP	COSTPA			
AND TERM				
TRANSPORTERS				
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CODED BY				
ENTERED BY				
() A BY				



RICHARD A. SCHNARR
Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM - Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS
234 City Hall & Court House 55102

ROGER M. CONWAY
Commissioner

August 4, 1971

Mr. Edward Hartung
Plant Manager
Whirlpool Corporation
850 Arcade Street
St. Paul, Minnesota 55106

Re: Phalen Creek Relief & Clearwater Sewer Project No. 71-S-1359B

Dear Mr. Hartung:

With reference to our discussion at the pre-construction conference about completing work on Whirlpool property during the August shutdown, please be advised that it will not be possible to do this work during August because of an inability to receive delivery on the necessary sewer pipe.

Hurley Construction Company has advised me that they will attempt to do this work during the anticipated December shutdown. If necessary the work will be done during a second shift or on a Saturday. In any event you will be notified at least two weeks prior to the time that we anticipate working on Whirlpool property. You will also be notified at least five days prior to any anticipated use of Whirlpool property for access to the job site.

If there are any questions which you may wish answered at this time please call me at 223-4138.

Sincerely,

Joseph F. Koenig

Construction Engineer

JFK/gs

cc: Hurley Construction Company

File 17566 Page 2 of 2

This proposed improvement was initiated by the Department of Public Works. For construction information, please telephone 223-5421.

To comply with the City Charter, the Department of Finance is charged with informing you of this public hearing.

If you have any questions, it is recommended that you attend this public hearing to afford you the opportunity to make your views, both pro and con, known to the City Council.

ROSALIE L. BUTLER Commissioner of Finance



RICHARD A. SCHNARR Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS 234 City Hall & Court House 55102

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Sincerely,

Joseph F. Koenig

Construction Engineer

JFK/gs

cc: Hurley Construction Company

5x Paul Mes - 6.65 00623 2400 KASOTA AVENUE • SAINT PAUL, MINNESOTA 55108 • TELEPHONE 612 645-3401 CONTRIONAL ET LA September 15, 1971 9/20/7/
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susquired vaccount rayela

if perista IA not

pollution Controll, Nahapes.

Mr. Floyd Forsberg MINNESOTA POLLUTION CONTROL AGENCY 717 Delaware S.E. Minneapolis, MN 55440

Dear Mr. Forsberg,

Each month we generate about 10 drums of dirty solvent. This solvent is very flammable and is very space consuming for storage, thus, creating a disposal problem.

We were wondering if you might know of any other firms with a similar problem and if you would have a recommendation for disposing of this product.

Thank you for your help. We will be looking forward to hearing from you.

Very sincerely yours,

H. B. FULLER COMPANY ELECTRO COTE DIVISION

Richard C. Johnson General Manager

RCJ:ja

CC: Tony Sieleni, Safety Director

H. B. FULLER COMPANY

SITE NAME:	PIG EYE LANDFILL	DCN: 00624
		≠ PAGES:
DATE.	27-71	SOURCE:
AUTHOR:	Dunis J. Grither Cost	PA-Sener MV.
	L.G. Holder WHIRLP	
TITLE.	Letter page with bold appear	
SUMMARY:	This downent is a let	for union states
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	sever volvme for the	1 , \(\bullet 11/711)
n COSTPA substantia	tra the in claim, so stip A regu	rests information
	regarding WHIRLP	expected
•	clarnate discharge	for 1972.
PRP's	COSTPA WHIRLP	
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FRANSPORT	ERS	·
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Self ...

THE STATE OF


RICHARD A. SCHNARR
Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

DEPARTMENT OF PUBLIC WORKS 234 City Holl & Court House 55102

ROGER M. CONWAY

Commissioner

September 27, 1971

GARY R. NORSTREM
Deputy Commissioner



Mr. L.G. Holder General Manager Whirlpool Corporation 850 Arcade Street St. Paul, Minnesota 55106

Dear Mr. Holder:

The Department of Public Works is requesting that the Metropolitan Sewer Board (M.S.8.) revise downward its 1972 estimate of sewer volume for the City of St. Paul. To assist us in substantiating our claim, please submit the following data:

- 1. On what date, will Whirlpool Corporation begin sending clearwater through the new Phalen Creek Relief and Clearwater Sewer?
- What volume of clearwater does Whirlpool Corporation anticipate sending into this sewer in 1972?
- 3. Are there any other reasons why Whirlpool Corporation would have a lower sanitary sewer volume in 1972?

Your speedy reply may help the Department of Public Works save all of St. Paul's sewer users from higher charges in 1972.

Yours Very truly,

Dennis J. Grittner

Sewer Design'Division

DJG/kw



RICHARD A. SCHNARR
Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

DEPARTMENT OF PUBLIC WORKS
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Yours very truly,

Dennis J. Grittner

Sewer Design'Division

DJG/kw

SITE NAME: PIG EYE LANDFILL	DCN: 00025
	= PAGES: 3
DATE: 10-U-71	SOURCE:
AUTHOR: JOHN P. Tailor; To	Wlor & Company, Inc.
RECIPIENT: RIWard Schnary,	COSTPA City Engineer
TITLE:	
SUMMARY: Mis downunt request	
COSTPA in order for	The author to prepare a
formal quotation for	
faculty must could	Sevice part or art of
me COSTPA. The do	Sevice part or all g) coment also indudes
	c to the information
requested	
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PRP's CATA	
FRANSPORTERS	
CODED BY	
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- No segregation is practiced at the present landfill except scavenger collection of larger saleable metal items.
- 2. Includes refuse from St. Paul Metropolitan Area which now contributes to present landfill:

10 year period = 18,000,000 cu. yds. = 5,000,000 tons
(@ 550±#/cu. yd. average)

- 3. No.
- 4. Would desire to salvage metallics to greatest extent possible consistent with economics.
- 5. It is thought that 3 (or at most, 4) intermediate disposal points such as transfer stations would be adequate and all compacted refuse would be hauled from these to one primary landfill, baling station, incinerator or other disposal means.
- 6. Inbound haulers would <u>not</u> haul waste away as this calls for specialized equipment and conflicts with the purpose and economics for hauling waste there in the first place.
- 7. Most residential collection by either private or City crews is made once per week but can vary due to individual arrangements with the hauler. Commercial, industrial and institutional collections usually range from twice per week to daily collection, based on need.

Presently, anyone (including private citizens) can haul material to the present landfill.



INCORPORATED

GENERAL OFFICE: BETTENDORF, IOWA
2403 STATE STREET ZIP CODE 52722
MAILING ADDRESS P.O. BOX 587 DAVENPORT, IA. ZIP CODE 52805

PROCESS EQUIPMENT DIVISION

CVX: SCRUBBERS, WET CYCLONES, REACTORS AND COMBUSTION SYSTEMS

STREAM-FLO: SPRAY DRYERS — ORGANIC AND INORGANIC — FLASH DRYERS

CROSS-FLO: DRYERS — COUNTER-FLO: DRYERS AND COOLERS

CALCINERS EVAPORATORS WASTE HEAT EXCHANGERS AND PREHEATERS

ZERO CLEARANCE AIR LOCK FEEDERS AND PREUMATIC CONVEYING SYSTEMS

STREAM-FLO BOILERS AND STEAM CLEANERS

MS PULSATION ELIMINATORS

October 6, 1971

Richard Schnarr City Engineer St. Paul, Minnesota

Subj: Carbonizer

Dear Mr. Schnarr:

ा अनुसर्वाति है है। सुरक्षा के कुछार कि है है। एक छात्री के कि के लिए हैं

In order that I prepare a formal quotation for a carbonizing facility that could service part or all of St. Paul, I would like to have the following information.

- 1. Is any segregation practiced in the disposal of inorganic materials.
- 2. What is the estimated tonnage that you would feel responsible for during the next 10 years.
- 3. Do you have any analysis of your present waste.
- 4. To what extent do you wish to salvage metallics from this system.
- 5. Would there be a practical arrangement of facilities in St. Paul that would most economically meet your haulage needs. In other words, how many locations would you like to use.
- 6. Could you use inbound haulers to carry the waste away or would you contemplate using city trucks for this.
 - 7. What type of pick up schedules do you presently practice and do you allow anyone to bring material to the dump.

 \tilde{I} trust that these questions can be answered in some reasonably spector so that I can provide you with a formal quotation with as much back up information as I can put together.

Sincerely yours,

TAILOR & COMPANY, INC.

Tailo

John P. Tailor

JPT:mf

cc: Don Lux



October 7, 1971

City of St. Paul Department of Public Works 234 City Hall & Court House St. Paul, Kinnesota 55102

Attention: Dennis J. Grittner
Sewer Design Engineer

Re: Your letter dated September 27, 1971, to our Mr. L. G. Holder

Gentlemen:

In answer to your inquiry regarding three specific questions as to plans for sewer volumes in 1972, we submit the following:

- 1. We are now in a position to connect to the clearwater sawer. We will have two connections, one 10" from our buildings on the east side of Arcade Street, and one 8" from our building on the west side of Arcade Street.

 We have not received approvals on the proposed metering of this clearwater and are very concerned as to when a decision will be made by the city so we may place an order for the installation of equipment to derive saving on our sewer charges.
- 2. We are estimating, at this time, that approximately .5 to .8 million gallons per day of clearwater will be discharged to this sewer.
- 3. Our anticipated sanitary sewer volumes for 1972, are expected to remain stable, less that volume which will be discharged into the Phalen Craek clearwater sewer.

Please contact me if you may require any additional information or documentation from Whirlpool.

Yours truly,

E. W. Hartung

Facilities Engineer

cc: L. G. Holder

P. Bowman

A. Holland



October 7, 1971

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Yours truly,

E. W. Hartung

Facilities Engineer

cc: L. G. Holder

P. Bowman

A. Holland

TO:

Joe Crea

FROM:

Kent Schonberger

DATE:

October 13, 1971

SUBJECT: QUESTIONS RAISED RELATIVE TO WHIRLPOOL CORPORATION'S REFUSE MATERIAL

Ed Hartung who is an engineer with the Whirlpool Corporation on Payne Avenue (phone 776-8511) called me on October 12, 1971 to state that the contractor who handles the waste disposal for Whirlpool had conveyed back to Mr. Hartung that there had been some questions raised at the landfill relative to the nature of the material which was being disposed of.

Mr. Hartung states that questions were raised by someone at the landfill as to the advisability or legality of disposing of what he calls "porcelain and paint sludge material". He says they dispose of no more than 15 to 20 barrels of such material on the basis of one to three months. He says these are not toxic materials and almost completely solid rather than liquid.

The porcelain material, he says, is a totally inert substance that is like a crushed or chipped glass material and has less than a 2% moisture factor. The paint sludge material, he says, is actually the residue left after cleaning out the recycling pumps used for painting and, he says, there is actually very little water in that. Since these are not flammable materials, nor are they toxic materials, he is wondering why the question is being raised about bringing this material to the landfill.

Since all I have to go on is what he tells me, I would appreciate your looking into this further and determining whether the amount of material, the nature of it, etc. is as he says or is different, and what your recommendations are with regard to the handling of it. If it is as he says, I see no problem to it, but if it is different, please let me know at your earliest convenience.

KS/em

DEN

10-21-71

from the sa

JOSEPH CREA

To = Non Thygrard Subject = It hirlpool Corp. Kefuse as per your Communication of Oct. 13th I am estufied that the materials mentioned pose no profile for us, and the material I am Concerned with is the closed dru Containing paint thenner which almost caused a burnt dozer and

loss of spirator at and last fine This load began burning and a soon as our dozen tried to pu the barrels away from the for

it exploded and flances started burning on the Hydraulie all

and undercaggage of diser 478 The exploding barrel flew up

glass and narrowly misse

our operator Ed. Lindstrom Luckily, The fire dept. wood ables drown the flamen. I then asked all haulers of drums to discostinue della lof any closed drums or drum with sil in them. This included Waste Cont McKnight, and Caranood Bro

and Poor Richards.

This for your reform Jacrea

DCN: 00032 SITE NAME: PIG EYE LANDFILL = PAGES: 2 SOURCE: DATE: 10-70-71 AUTHOR: U.S. Nept. of LUBOr RECIPIENT: TITLE: MSDS SUMMARY: MY ADWMENT 15 a MSDS for D-220 Contact adversive manufactured ns Armomone Cork company. PRP's TRANSPORTERS (ODED BY ENTERED BY Q A BY

Budget Burnar No. 44-B) 187 Approval Expires April 30, 1971

Coin No. 158-005-4 May 1909

WAGE AND LABOR STANDARDS ADMINISTRATION GEORGE W. NICKEL, P. E. Bureau of Labor Standards

SAFETY DIRECTOR

MATERIAL SAFETY DATA SHEET

ARMSTRONG CORK COMPANY LIBERTY STREET LANCASTER PA. 17604

					1
·		SECT	ON I October 20, 197	1	.
MANUFACTURER'S NAME			EMERGENCY TELEPHONE NO		
Armstrong Cork Company ADDRESS (Number, Street, City, State, and ZIP Co	ode)		717-397-0611		
West Liberty Street, Lar	cast	er, PA	17604		
CHEMICAL NAME AND SYNONYMS N.A.			D-220 Contact Adhesive		
CHEMICAL FAMILY			FORMULA		
Solvent disbursed synthetic rub	per-		N. A.		نـــــن
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Synthetic rubber	15		BASE METAL		
Phenolic resin	10		ALLOYS .		
Acetone Acetone	15	1000PPN	METALLIC COATINGS		
Methyl ethyl ketone	5	200PPN	FILLER METAL PLUS COATING OR CORE FLUX		
Toluene	10	200PPN	OTHERS		
*Petroleum naphtha	45	500PPI			
			TLV (Units)		
Calculated T.L.V.	700	435PPM			
Jarou, avea 1 25 1	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>				
*The amount of benzene preser	nt in	this p	articular petroleum naphtha is		
less than 0.20%.					
				Air i	, V9292
For Marian Values S	ECTIC	N IU F	HYSICAL DATA	و الم	
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VAPOR PRESSURE (mm Hg.)	Not	known	PERCENT VOLATILE BY VOLUME (%)		75
VAPOR DENSITY (AIR=1)	Not	known	EVAPORATION RATE (=1)	No	t known
SOLUBILITY IN WATER	Neg	zligibl) ë	<u> </u>	<u> </u>
APPEARANCE AND ODOR Straw colored liquid, odor of solvent					
SECTION IV FIRE AND EXPLOSION HAZARD DATA					
FLASH POINT (Method used) F (open cup) FLAMMABLE LIMITS Lei Uei Not known					
Extinguishing Media Carbon dioxide gas. dry chemical					
SPECIAL FIRE FIGHTING PROCEDURES Same as for any flammable	liar	id fire	hazard		
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unusual fire and explosion hazards None-flammable liquid ha	zard				
				Vije	
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Ų	supplying res	spirators can	be used	d if adeq	uate ventilat	ion is not	available.	osimece=_	
	WASTE DISPOSAL ME	THOD or other suit	able m	neana			······································		
waste disposal Method Landfill or other suitable means									
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•	Chemical ca	cijon (Specify type) irtridge respin	rator,	approved	under Bureau	of Mines	Schedules 2	3, 23A or	23B fo
:	VENTILATION	LOCAL EXHAUST	Prefer	able	1	SPECIAL	eneral dilu	organid	vapor
MECHANICAL (General) ACCeptable OTHER N.A. Ventilator.									
PROTECTIVE GLOVES Cotton or loop-pile gloves EYE PROTECTION Spectacles: metal, plastic or metal-plastic frame									
:	OTHER PROTECTIVE	Ser			M EYE BATH	\$1. 800 to \$1.00 \$1.00	2571.457257 (BB20544) AND	STONE SECTION	14
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ť	OTHER PRECAUTION	s low 100° F.	D.LU.	vo spect	al precaution	s olner tr	an co treat	as a flan	
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SITE N	NAME: <u>PIG EYE LANDFIL</u>	<u>L</u>	DCN: 00034
, 3332		_	= PAGES:
DATE	11-8-71		SOURCE:
AUTH	OR: DEMNISOR	itter DPWCS	P
RECIF	PIENT: Ed Havet	ms Whelp	
TITLE	Ryund ap	mication of Sei	wer Service Charge Form 3 Sewer Service Jan-Aug. 1971
SUMM	MARY: This dow	ment includes	3 Sewer service
50 ms "	computations	of WHIRLP	Jan-Aug. 1971
ffmd		V	
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PRP's	WHIRIP	COSTPA	
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(· () D	ED BY		
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RICHARD A. SCHNARR Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS

234 City Hall & Court House 55102

ROGER M. CONWAY
Commissioner

November 8, 1971

Mr. Ed Hartung Whirlpool Corporation 850 Arcade Street St. Paul, Minnesota 55106

Dear Mr. Hartung:

Please find enclosed three sewer service refund application forms and the computations of your January-August, 1971 refund.

Upon receiving a signed refund application I will present it to the Board of Water Commissioners at their next meeting.

lepy truly yours

Dennis Gritther

Sewer Design Division

DG/kw

Enclosures

REFUND APPLICATION OF SEVER SERVICE CHARGES

pertaining to the ad WHIRLPOOL CORPORAT		name of company) her		an
application for \$ 1,		refund on past paid		•
(list billing period	- Honth) Sewer Se	ervice Charges.	1	•
City or well water Meter Unit Location	Billing Period Honths	Water Consumption at Meter 100 cu.ft.	Adjusted Sewer Service Charges	Original Sewer Service Charges
838 Arcade Street	January	1,462		\$ 312,40
11 11 11	February	3,221	\$ 367.40	657.57
1f 15 11	March	2,696	160.60	559.20
п и ц	April	6,400	911.55	1,142,00
21 17 21	May	13,866	1,782.50	1,996.60
		Total	\$3,222.05	\$4,667.77
Additional Pertinent	Information:	Water used for ste	eam generation.	
(List or attach with explanation)				

\$1gned:_	Millantures	
Title:	Facilities Engineer	

REFUND APPLICATION OF SEVER SERVICE CHARGES

pertaining to the ac	ljustment and refur	nd of Sewer Service	Charges,	
WHIRLPOOL CORPORA	TION (r	name of company) he	rewith submits a	an .
application for \$ 1,	013.63 (amount	refund on past paid	d JUNE THRU AUGUS	ST, 1971
(list billing period	I - Month) Sewer Se	rvice Charges.		
City or well water Meter Unit Location	Pilling Period Months	Water Consumption at Neter 100 cu.ft.	Adjusted Sewer Service Charges	Original Sewer Service Charges
838 Arcade Street	June	4,811	\$493.00	\$927.87
n n	July	4,509	622.04	876.53
51 11 11	August	4,431	539.00	863.27
				j
		Total	\$1,654.04	\$2,667.67
Additional Pertinent	Information:	Water used for st	cam generation.	
(List or attach with explanation)				·
	• • • • • • • • • • • • • • • • • • • •		والمناوات الموطلون والموسود وا	

Signed: Suffitury
Title: Facilities/Engineer

REFUND APPLICATION OF SEVER SERVICE CHARGES

In accordance with Section 231.05 of City Council Ordinance No. 14662,						
pertaining to the adjustment and refund of Sewer Service Charges,						
WHIRLPOOL CORPORATION (name of company) herewith submits an						
application for \$ (amount refund on past paid SEPTEMBER THRU DECEMBER, 1971						
(list billing period	- Month) Sewer Se	rvice Charges.				
	•	1	1	!		
City or well water Meter Unit Location	Billing Period Months	Water Consumption at Neter 100 cu.ft.	Adjusted Sewer Service Charges	Original Sewer Service Charges		
838 Arcade Street	September	5,470		\$1,021.10		
11 11 11	October	3,301	·	671.17		
Л И и	November	1,988		417.60		
II II II	Dec ember	6,717		1,183.21		
				•		
		Total		\$3,293.08		
Additional Pertinent	Information:	Water used for stea	am generation			
(List or attach with		J				
explanation)			•			
•						
:		\$1gned	. /			
	•	71tle	Facilities Erg	gineer		

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GAL.	CU.FT.	95% 100 CU.FT.	CONS	ACTUAL USE	CHARGE ADJ ^{US} FOR ACTUAL USE	AMOUNT BILLED	ORIG
1,232,000	164,705.88	1565	1462	0	\$ 00.00	\$312.40	Jan.
1,087,000	145,320.86	1381	3221	1737	\$367.40	\$657.57	Feb.
1,548,000	206,951.87	1966	2696	730	\$160.60	\$559.20	March
1,327,000	177,406.42	1685	6400	4715	\$911.55	\$1142.00	April
1,686,000	225,401.07	2141	13866	11725	\$1782.50	\$1996.60	May
1,926,000	257,486.64	2446	4811	2365	\$493.00	\$927.87	June
1,179,000	157,620.32	1497	4509	3012	\$622.04	\$876.53	July
1,446,000	193,315.51	1836	4431	2595	\$539.00	\$863.27	Aug.
•	•				•		

TOTAL BILLED TOTAL CHARGE FOR ACTUAL USE

\$7,335.44 \$4,876.09 \$2,459.35

Refund for January - August 1971 bills \$2,459.35

		Co. 1-	Y	£1112	Acron 4	100 me Bara
Se	1, 711, 000	228,743.30	2173	5400	2227	# 1021.10
ðseju	1, 126 200	150,534.70	1430	<u> 22</u> 7		671.17
1104 -	1,037,000	138 636,30	1317	1933	671	417.60
200	1,011,000	/35,160.40	1284	67/7	5433	1183.21

DCN: 00039 SITE NAME: PIG EYE LANDFILL = PAGES: / DATE: 11-19-71 SOURCE: AUTHOR: Dennis J. Grittner, DPWCSP RECIPIENT: Ed Hamung, WHIRLD Letter re: Sener Charges SUMMARY: This document is a little which state beginning 1-72 DPWCSP will process adjustments to sever charges ma GUTPH WHPLP PRP's TRANSPORTERS CODED BY **ENTERED BY** QABY



RICHARD A. SCHNARR Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS
234 City Hall & Court House 55102

ROGER M. CONWAY
Commissioner

November 19, 1971

Mr. Ed Hartung Whirlpool Corp. 850 Arcade St. St. Paul, Mn. 55106

Dear Mr. Hartung:

Beginning on January 1st 1972, the Department of Public Works will process adjustments to Sewer Service Charges on a monthly basis.

Our Department is requesting that each company calculate its own adjustment, and send a request for said adjustment along with all necessary calculations to:

Wastes Section - Sewer Design Division Department Of Public Works Room 38, City Hall Saint Paul, Minnesota 55102

If you or any other member of your firm would like to discuss the method of calculating your refund with our staff, please contact myself or Mr. William Tschida at 223-4254 or drop by our office in City Hall.

Yours Very Truly,

Dennis J. Grittner Senior Wastes Technician

P.S. While uniformity and preciseness of data is important, no particular refund form will be required.

DCN: 00046
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SOURCE:
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DEPARTMENT OF THE ARMY ST. PAUL DISTRICT, CORPS OF ENGINEERS 1210 U. S. POST OFFICE & CUSTOM HOUSE ST. PAUL, MINNESOTA 55101

IN REPER REFER TO

NCSCG-S

0%010371

Gentlemen:

Presidential Executive Order No. 11574 of 23 December 197D directed the Corps of Engineers to implement a permit program under the authority of the Refuse Act. This program became effective on 1 July 1971 and required all industries which have a discharge to the navigable waters or tributaries thereof to make application for a permit for that discharge.

It has become apparent that some dischargers who require a permit are unaware of their responsibilities under the law. We are requesting your cooperation and assistance in fulfilling our obligation to identify such dischargers by completing the inclosed questionnaire and returning it as promptly as possible.

The information gathered will allow us to eliminate those industries which are definitely excluded from the Act and to assist those subject to the Refuse Act in meeting their responsibilities.

In general, discharges of sewage (human waste) and discharges to a municipal sewage treatment plant are exempt from the Refuse Act. This exemption does not apply to discharges to a municipal storm sewer. Discharges to a completely closed septic system are exempt as are discharges to the subsoil. Discharges consisting of process water, cooling water, boiler blowdown, boiler condensate, clean up water and cooling tower or air conditioning water are subject to the Refuse Act.

NCSCO-S

It should be noted that the quality of a discharge does not determine the need for a permit. The existence of a discharge establishes the permit requirement. Quality evaluation will be the basis for the decision whether a permit is issued and for conditions which may be made a part of the permit.

A self-addressed, postage free envelope is included for your use in returning the questionnaire.

Sincerely yours,

WM. L. GOETZ

Chief, Construction-Operations Division

3 Incl As stated

QUESTIONNAIRE (See Instructs Berore Completing) _____ DATE: /2/14/7/ FACILITY NAME: ___ FIRM NAME: 02626 (If Different Than Firm) . WHIRLPOOL CORPORATION ADDRESS: ADDRESS: 850 ARCADE STREET 55106 MN ST PAUL 00642 DISCHARGES STREETS E. PU DISCHARGES FROM THIS FREILITY ARE INTO THE (SPECIFY) City OF ST. PAUL FITALEN CRUEK SEWER. WATER WATER

STORM WATER: FROM ROOF DRAINS BOILER BLOW-DOWN CONDENSATE STORM WATER: FROM PARKING SANITARY WASTE STORM WATER: FROM OTHER PROCESSING CLEAN-UP COOLING DISPOSAL DISCHARGE X Municipal Sewage Treatment System Municipal Sewage System - Untreated Municipal Storm Sewer Closed Septic System Open Septic System Settling Pond: Closed Open _____ Creek, River or Lake Name of Waterway

Other: (Specify)

NAME OF PERSON SIGNING (PRINT) EN HARTING

SIGNATURE: Signature:

TITLE: PROLITIES ENGINEER

Incl 1

SITE NAME: PIG EYE LANDFILL	DCN: 07/043
	= PAGES. 2
DATE. 1971	SOURCE:
AUTHOR: E.W. HARTUNE	
RECIPIENT:	
TITLE: 1971 + 1972 BOILER F	eliswater usace charts
SUMMARY: MIS downert Cov	ntains monthly intermat
for the years 71?	72 to the tollowing
catusories: Boiler n	neter feedwater (gallons);
W. 87; 95% CV. Ft	Act. Use; amout
act. Use Cha fo	Act. Use: amout
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TRANSPORTERS	
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ENTERED BY	
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1971 BOILER FEEDWATER USAGE 4" Meter 838 Arcade Street

<u>Month</u>	Boiler Meter Feedwater Gallons	Cu. Ft.	95% Cu. Ft.	City Meter Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg.for Act Use	Amount Billed On Sewer Bill
January	1,232,000	164,705.88	156,500	1,462	· -	-	\$ 312.40
February	1,087,000	145,320.86	138,100	322,160	1,737	\$367.40	657.57
March	1,548,000	206,951.87	196,600	2,696	730	160.60	559.20
April	1,327,000	177,406.42	168,500	6,400	4,715	911.55	1,142.00
May	1,686,000	225,401.07	214,100	13,866	11,725	1,782.50	1,996.60
June	1,926,000	257,486.64	244,600	4,811	2,365	493.00	927.87
July	1,179,000	157,620.32	149,700	4,509	3,012	622.04	876.53
August	1,446,000	193,315.51	183,600	4,431	2,595	539.00	863.27
September	1,711,000	228,743.30	217,300	5,470	3, 297	670.49	1,021.10
October	1,126,000	150,534.70	143,000	3,301	1,871	394.20	671.17
November	1,037,000	138,636.30	131,700	1,988	671	147.62	417.60
December	1,011,000	135,160.40	128,400	6,717	5,433	1,016.29 7,104.69	# 1,183.21 # 70,628.52

TOTAL REFUND FOR 1971 = 3523.83 GUH.

E. W. Hartung Facilities Engineer

1972 BOILER FEEDWATER USAGE 4" Meter 838 Arcade Street

	Boiler Meter Feedwater		and a Rh	City Meter Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg. for Act Use	Amount Billed On Sewer Bill	
Month	Gallons	Cu. Ft.	95% Cu. Ft.		2,991	\$658.06	\$ 964.59	
January	1,237,000	165,352.2	157,085	4,562	,	269.78	643.02	
	1,367,000	182,729.5	173,593	2,921	1,185		636.78	
February		176,446.9	167,625	2,892	1,215	276.23	-	
March	1,320,000	•	162,545	2,954	1,328	300.52	650.11	
April	1,280,000	171,100.1	152,005	2,558	1,037	237.96	564.97	
May	1,197,000	160,005.3		•	2,246	497.89	785.97	
June	1,102,000	147,306.5	139,941	3,646		# 2240,44	4245.44	

July

August

September

October

November

December

TOTAL REFUND FIRST 6 MONTHS 1972 = 2,005.00

E. W. Hartung Facilities Engineer

SITE NAME: PIG EYE LANDFILL	DCN: 00044
	# PAGES:
DATE: 1-21-72	SOURCE.
AUTHOR: E.W. Harting	
RECIPIENT: DPWCGO - Waste Section	M
TITLE: WHIRLP COVERLETER	
SUMMARY: Mis downent is a co	venete unias
exalls information Re	: process sener
marcl adjustment is	s enclosed:
honever the downer	4 15 not
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TAMES OF THE STATE


ST. PAUL DIVISION

January 21, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall St. Paul, Minnesota 55102

Attention: Dennis J. Grittner

Senior Wastes Technician

Re: Sewer Charge Adjustment on Boiler water Usage for September, October, November and December of 1971

Dear Dennis,

Enclosed please find the information that you will require to process a sewer charge adjustment for our Boiler Feedwater Usage, during the last four months of 1971.

I understand that you will do the calculation of the dollar amounts to be refunded.

If you have any questions or require additional information, please contact me at 776-8511.

Yours truly,

E. W. Hartung Plant Engineering 200 3400 MACH 1000 RAMSEY COUNTY DATA PROCESSING DEPT. B. C. SPEAR, DIRECTOR

67 to 4 play Co

SYSTEM TITLE: ST. PAUL REFUSE BILLING SYSTEM

SYSTEM NUMBER: 21302

WRITTEN FOR: CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

REQUESTED BY: ROGER M. CONWAY, COMMISSIONER OF PUBLIC WORKS

CUSTOMER LIAISON: JAMES F. SCHWARTZ, CHIEF ACCOUNTANT & P.W.

SYSTEM BY: THOMAS A. TROJACK

PROGRAMMED BY: THOMAS A. TROJACK Planta

10/27

7292-6143

298,5317

Public works-Jim hurite
Rosir Anderson

DATE ASSIGNED: OCTOBER 1, 1971
DATE PRODUCTION BEGAN: JANUARY 14, 1972
DATE OF RUNBOOK:
EXPECTED FREQUENCY OF PRODUCTION: BI-WEEKLY

The ribber pand

B. Since Pig's Eye is the only disposal facility in St. Paul, it takes an enormous quantity of refuse. In 1969, 1,390,847 cubic yards were disposed of at Pig's Eye, or 345,712 tons. In 1970, the quantity of refuse disposed rose to 1,557,949 cubic yards, or 389,488 tons. So far in 1971 we have the following figures by month:

January	111,385	cu.	yds.	-	27,846	tons
February	107,719	11	11	-	26,929	11
March	140,653	11	11	-	35,163	11
April	174,500	11	11	-	43,625	11
Мау	155,508.	11	н	-	38,877	11
June	169,060	ţI	T F	-	42,265	11
July	161,653	11	11	-	40,413	11
August	156,236	11	11	-	39,059	**
September	145,970	ir	11 /	-	36,492	11
October	140,770	11	11	-	35,192	11

The average daily quantity of refuse disposed at Pig's Eye is 5,500 cubic yards, or 1,375 tons per day. This figure is based on the unit weight of one cubic yard of combined refuse including garbage and rubbish, of 500 pounds per cubic yard. Federal guidelines indicate that at the present time one person generates about 5.3 pounds of refuse per day. If we run this out on the basis of St. Paul's population, slightly in excess of 300,000, this works out to be about 750 tons of refuse generated per day. It is estimated that by 1980 the figure of 5.3 will have grown to 10 pounds per person per day, or about 1,500 tons per day in St. Paul. You will note that the 5.3 figure per person per day, or 750 tons per day, is somewhat less than the 1,375 tons disposed at Pig's Eye. Obviously, this comes about because most of the surrounding suburbs, including

West St. Paul, South St. Paul, Roseville, and Maplewood, and other suburbs are hauling large quantities of their refuse into Pig's Eye. The my judgment we should be designing transfer facilities for St. Paul to accommodate 2,000 tons per day based on a 10-hour work day. This would provide capacity for a projected refuse quantities through 1980.

- C. Since the Pig's Eye Landfill site will be closed down by the State on July 1, 1972, a little more than six months away, and since Pig's Eye is presently handling approximately 1,375 tons of refuse per day, an enormous quantity, and since it is very unlikely that another landfill facility will be found close to St. Paul and, more than likely, it will be a joint facility with Washington County located some place east of St. Paul, it's very important that intermediate transfer stations be constructed whereby the smaller collection trucks can dump refuse at these points and the refuse would then be hauled in large 75 to 100-cubic yard semi trucks out to the final disposal site.
- D. What present transfer stations and facilities are available in St. Paul? American Hoist and Derrick has shown the way to this point. American Solid Waste Systems, a subsidiary of American Hoist, recently constructed a small transfer station on Rosen Road easterly of the Midway Stadium. It's a small station of approximately 250 tons per day capacity. American Systems also constructed a solid waste baler in the Riverview Industrial Area of St. Paul in conjunction with the transfer station. The baler compresses the solid waste into a block approximately 3'x3'x4½' weighing 2,500 pounds. The bales are then ahuled to a landfill site in Inver Grove.

, mber sent	to Haulers	103	•		•	
Number Retur	med	• • • 53	(51%)			
						<u>.</u>
Daily Trips	to Disposal Area	183				
Total Yardag	e Hauled	3,593		·.		e :.
Yardage to F	rig's Eye	2,402	(67%)	605	ocy B	
Yes, Will us	se new transfer station .	16	(30%)			:
Conditional	Yes, Will use station .	6	(11%)		· · · · · · · · · · · · · · · · · · ·	
No, Wom't us	e new transfer station .	27	(51%)			
Don't know c	r indefinite	4	(8%)		TV 	÷ .
Other Dispos	al Areas indicated	57 (s	ome Haulers o	checked more	than one)	
	Lake Jane - 12	(21%)				·
	Midway - 13	(23%)	1	•		
	Baler - 7	(12%)				
	Pine Bend - 8	(14%)				
	Other - 17	(30%)				
					•	

A total of 55 forms were returned, (two were to vague to be included in the summary). Several Haulers stated that a transfer station rate of \$1.00 per yard was too high.

Of the 17 Haulers in the "other" disposal area group several either did not know whether they would use Fish Hatchery or if not, they did not know where they would dump.

Projecting the figures to arrive at an expected volume for a new station gives a daily amount of 245 tons.

DCS May 26.1972



RICHARD A. SCHNARR
Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS

234 City Hall & Court House 55102

ROGER M. CONWAY

Commissioner

TO:

Ramsey County Solid Waste Coordinating Committee

FROM:

Richard A. Schnarr, Chief Engineer

DATE:

February 25, 1972

SUBJECT:

Volumes and Tonnages of Solid Waste Received at City of St. Paul Landfills

The following information is presented to furnish some idea of the volume of material which has in recent years been brought to the City of St. Paul Landfills for disposal. It is difficult to determine exactly which amounts of this total quantity originates within the City of St. Paul itself and which originates within other portions of Ramsey County or in some instances outside of Ramsey County. However, it is quite likely that plans should be made in accordance with the fact that this same approximate volume will have to be handled through some combination of transfer stations, baling stations, landfills or other disposal methods.

1969

Monthly, Mimimum and Maximum Volumes -

100,000 Cu. Yds. to 131,000 Cu. Yds.

Average Monthly Volume -

120,000 Cu. Yds. Per Month

Annual Total Volume -

1,400,000 Cu. Yds.

1970

Monthly, Mimimum and Maximum Volumes -

100,000 Cu. Yds. to 157,000 Cu. Yds.

Annual Total Volume -

130,000 Cu. Yds. Per Month

2

1970

Annual Total Volume -

1,550,000 Cu. Yds.

Volume Increase 1969-70 -

11.35%

1971

Monthly, Mimimum and Maximum Volumes - 108,000 Cu. Yds. to 174,000 Cu. Yds.

Average Monthly Volume -

144,000 Cu. Yds. Per Month

Annual Total Volume -

1,719,000 Cu. Yds.

Volume Increase 1970-71 -

10.90%

Since the design criteria for any Solid Waste facility would not be based on average volumes but on peak volumes, it would appear that the high monthly figure of 175,000 cubic yards per month which occurred in 1971 should be utilized. On the assumption the facility would be open 6 days per week or about 25 days out of each month, this would then mean the volume per day would approximate 7,000 cubic yards per day requirement.

Solid Waste varies widely in density but on the assumption that 500 pounds per cubic yard would be reasonably average, this would then mean that the 7,000 cubic yards per day would be the equivalent of 1,750 tons per day which a facility would have to furnish. Allowing some additional room for the expansion of volume of Solid Waste which has been increasing on the basis of approximately 11% per year the last few years, it would appear that two -- 1,000 ton installations or three -- 750 ton installations would entirely suffice as replacements for the present landfill.

It is realized that the tonnage criteria for a Solid Waste facility can be affected by requirements spitting the haulage of Solid Waste from specific portions of the County to either specific landfills or other disposal sites and thereby af an fecting the location and hence the volume which would be contributory to the facilities in the City of St. Paul.

MATERIAL YARDAGE DELIVERED TO LANDFILLS IN 1970

Date	Yds. Paid	Charitable	Parks	Public Works	Garbage	Total Yds.	Cover
January	100,633	956	935	106	4,447	111,525	11,256
February	100,785	1,228	1,465	319	4,448	108,245	10,068
March	110,412	1,374	1,543	439	4,983	118,751	4,08
April	139,492	1,016	1,624	875	5,165	144,747	5,02
May	139,274	1,802	1,895	381	4,774	147,126	20,28
June	147,324	1,278	2,195	248	5,219	156,254	13,84
July	143,128	1,622	1,922	441	5,119	152,232	9,87
August	144,283	950	1,329	600	4,888	152,047	8,58
September	135,258	432	1,445	490	4,850	142,475	8,29
October	149,760	1,736	382	287	4,854	157,019	12,86
November	127,996	1,052	1,438	842	4,397	135,725	11,700
December	119,604	1,060	1,494	437	5,056	127,651	15,802
Totals	1,557,949	14,506	17,667	5,465	58,200	1,653,797	131,66

SITE NAME: PIG EYE LANDFILL	DCN: ()()() 3 2
•	≠ PAGES:
DATE: 1-15-72	SOURCE:
AUTHOR: V. HILLSTROM - G	cheral Foreman
RECIPIENT: AU SUPT.	
TITLE MIMO Re: Dis	, A
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or will not be as	cepted by "Salvage"
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All Departments

Subject: Disposal of Liquids

We have been notified by the Pollution Control Agency that all liquids sent to Salvage, by the various departments for disposal, are going to require special handling. Therefore the barrels containing any type of liquid will not be accepted by Salvage unless the contents are clearly labeled on the outside of the barrel and the barrels fitted with an acceptable cover.

General Foreman Maintenance Dept.

D. Casey cc:

R. Ranta

D. Smith

J. Kissinger

A. Erickson

A. Holland

F. Vanyo E. Hartung

R. Scalze

SITE NAME: PIG EYE LANDFILL	DCN: 00653
	= PAGES: 5
DATE 1-19-72-	SOURCE:
AUTHOR: T.H. GOODAAME	
RECIPIENT: R.GRAV LA al.	
TITLE: Memo Re: Low Hydro SUMMARY: This document discusses	carbon Emission
SUMMARY: This document discusses	"smog" un "span
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from cars, paint system	
plants and petroleum	
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where Plants in Eva	insville; st. Paul
are in Priorty I Res	sims. The document
also discusses the	different means
of eliminating hydr	OCOMMS.
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To:	R. Grau	(Åd Center)
	H. Tumblin	(Clyde)
	J. Anderson	(Danville)
	C. Morris	(Evansville)
	H. Langenderfer	(Findlay)
	J. Evanoff	(Ft. Smith)
	P. Broadstone	(Heil-Quaker)
	C. Maiden	(John Inglis)
	G. Scott	(LaPorte)
	D. Schuster	(Marion)
	L. Hauch	(St. Joseph)
	A. Holland	(St. Paul)
	W. Hall	(Thomas Organ)
	S. Pekol	(Warwick)

From: T. H. Goodgame

Subj: Low Hydrocarbon Emission Paint Systems

At the Second Corporate Environmental Control Meeting, it became apparent that there was considerable misunderstanding as to our needs for non-pollution paint systems and the timing and reasons for these needs. This memorandum is intended to provide better understanding of the situation and to provide guidance for action in this area.

For some time now, a number of areas of the U.S., principally major cities such as Los Angeles, New York, Chicago, Philadelphia, have had high levels of "smog". This "smog" is unsightly, causes eye irritation, can cause respiratory problems, etc. A principal factor in "smog" is a group of chemical compounds similar in effect to, and including, ozone. These compounds are called "photochemical oxidants". The most important source of the "photochemical oxidants" is non-methane hydrocarbons emitted into the atmosphere from a wide number of sources, of which automobile exhausts are the major contributor. Other sources include exhausts from paint systems, breathing of storage facilities, petrochemical plants and petroleum refineries.

It had become obvious at least two years ago that something would have to be done about this situation on a national basis. This would include restrictions on both automotive and industrial emissions. At least two of the Whirlpool operating divisions had made plans to install devices (after burners) to burn the hydrocarbons in the exhaust from their paint systems.

In December 1970, the Clean Air Amendments Act of 1970 became law. This law set a timetable for the control of various atmospheric contaminants, including photochemical oxidants and hydrocarbons. Shortly before this, the Environmental Protection Agency (EPA) had been formed by the President

of the U.S. to combine pollution control programs of four different departments and fourteen different agencies into one organization, which also had the responsibility for implementation and enforcement of environmental programs.

All the legislation and federal activity gave reinforcement to our belief that some action would have to be taken to reduce our hydrocarbon emissions. A study of the situation showed the following. Incineration was a completely workable process for the removal of hydrocarbons. The equipment for the process was readily available, but the capital cost was fairly high. It required natural gas (or some other fuel) to support combustion with resulting substantial operating costs and was thereby wasteful in that it used additional energy to destroy a pollutant.

Absorption of the hydrocarbon in the exhaust from the system was also a proposed process which was completely workable, but which had a high capital cost, required considerable energy for operation, was complicated and equipment would probably have to be specially designed for each Division.

Other processes for the removal of hydrocarbons from the exhaust were considered but discarded for one reason or another. For example, catalytic incineration would operate at much lower temperatures and require less gas, but the catalysts were subject to poisoning and the systems were not reliable.

Processes of the above sorts were given first consideration because they would reduce hydrocarbon emissions without requiring us to make changes to our paint systems, which might affect the finish. The disadvantages were that generally they were costly in both equipment and operation, and that we would have to know exactly where the hydrocarbons were being exhausted before we could apply this method of emission control.

Based on this analysis, it was decided to follow the program outlined below. (First), work actively with our paint suppliers to develop paint system which exhausted little or no hydrocarbons. Second) stay abreast of current practice and new developments in methods for destruction or recovery of hydrocarbons from paint systems exhausts. And third, analyze the paint system exhausts for one or more Divisions to determine from which stacks and in what quantities the hydrocarbons were being exhausted.

Tom Miranda, of Materials & Processing Research, had been working with the Research Departments of most of our suppliers. In addition, a number of our operating divisions were working with them. An evaluation of the information we were able to gather indicated that two systems (water reduced systems and high solids content systems) were worth our concentrated attention as possible solutions to the problem by removing hydrocarbons from the process.

As it turned out, we were already using one process of this type. The "Electro-Dep" process is essentially an emulsified paint system whereby the paint is deposited upon the ware by electrical attractive forces operating through a water bath. While this system works well, it is more expensive in both capital and operating costs than the "flow-coat" with which it competes.

We then made the decision to move ahead as rapidly as possible on water-reduced paint systems, which would be applicable to our present "flow-coaters", and on high solids content paint systems which could be used in our present spinning disc or electrostatic spray systems. Work has been moving along at several Divisions in these areas. Other systems, such as powder coating and low energy cure are still being followed in M&PR, but these will not be ready to meet our needs for several years.

Shortly after the beginning of 1971, the EPA began to publish rules and regulations implementing the Clean Air Amendments Act of 1970. The situation has continued to develop according to the timetable set up in the Act. This has been about as follows: In April 1971, the EPA established primary and secondary ambient air quality standards to cover the entire U.S. for six contaminants including photochemical oxidants and hydrocarbons. By January 31, 1972, the States were to submit to EPA implementation plans by which they would describe how they would achieve the national ambient air quality standards by mid-1975 if they were not already met, and also how they would prevent the concentrations of the six contaminants from increasing (non-degradation clause) in regions within the states which were already meeting the national ambient air quality standards.

For the past three months, various of the states in which we have operating divisions have been holding public hearings, as required by federal law, on their proposed air implementation plans. The study of these various implementation plans has shown that we have been working in the correct direction as the discussion below will indicate.

The state air implementation plans generally divide the states into multicounty regions. These regions are classified as <u>Priority</u> I for hydrocarbons if the national ambient air quality standards are exceeded and Priority III if the standards are being met. (Without data, a region containing a city of above 200,000 population is considered as exceeding the standards and one below as meeting the standards.) The regions are similarly classified for photochemical oxidants. Since hydrocarbons are the major source of photochemical oxidants, reduction in hydrocarbons will both reduce, and be required to reduce, photochemical oxidants.

In regions classified as Priority I action must be taken to reduce hydrocarbons. It appears at present that we have plants in two locations, Evansville and St. Paul, which are treated as Priority I classification. In these two locations, there is a near certainty that we will have to take some action by mid-1975 to reduce our hydrocarbon emissions, if we make no other changes in the plants. I say a near certainty, because there is a possibility that the reductions in automobile emissions by 1975 will have permitted the regions in which Evansville and St. Paul are located to achieve their national ambient air quality standards without other action.

For plants located in Priority III regions, it presently appears that we will have to take no action on hydrocarbon reduction, except as discussed below.

Each state air implementation plan contains a <u>non-degradation clause</u> and <u>requires a permit</u> for <u>construction</u> of a <u>new facility</u>, for <u>renovation</u> and/or <u>substantial modification</u> of an <u>existing facility</u>, and <u>permits</u>, generally,

line speed change to encrease production ration a substantial modefration) for <u>operation</u> of facilities so constructed, renovated and/or modified. For a facility to be in compliance with the non-degradation clause, the EPA has recommended to the states that the <u>emissions of hydrocarbons be reduced 90%</u> over that of a <u>standard system</u> by the use of incineration or absorption, but that if the <u>hydrocarbon content</u> of the <u>paint system</u> is reduced then only an <u>80% reduction</u> would be required.

Thus all new facilities we built anywhere and all plant expansions will have to be systems which meet the 90% incineration or absorption requirement or the 80% hydrocarbon content reduction requirement. What substantial modification of a plant system means is apparently up to the state air pollution control authority, but the wording is generally of such a nature that a change as simple as increasing chain speed could be considered a substantial modification and therefore would come under the permit and hydrocarbon reduction requirements.

It is obvious thus that we need means of eliminating hydrocarbons.

Several of our divisions have been told that natural gas is not available for operation of incineration or absorption facilities. This means that eliminating the hydrocarbon from the paint system is the only avenue open to us to comply with the requirements. We must then have available, and ready for production to use, processes which will permit us to operate freely. A number of divisions have been working in this area. For purposes of this discussion I will talk only of the work being done at the Findlay Division.

Findlay has been working for several months on proving a water reducible primer system that is operable in existing flow-coaters. They have spent approximately \$1500 in preliminary equipment changes, which permitted them to make two weekend trial runs using a water reduced Glidden material. Changing to this material would result in a decrease in hydrocarbon emissions from each flow-coater of about 95%. The material has been approved by Findlay Q.E.L. and Laundry Group Materials Lab. Samples have been submitted to Laundry Group Engineering Lab for final approval. I strongly recommend that just as soon as this approval is given that the materials be put into use on a production basis at one location so that we will have a production tested and operating system that we can use wherever in the company we are required to go to a non-polluting paint system. I know it can be argued that we can always shift to the electro-dep process and meet these same emission reduction requirements, but changing a flow-coater to electro-dep is expensive and time consuming and may not be warranted when we have a flow-coater in good condition. If the flow-coater is going to be replaced or renovated then the entire situation should be studied to see whether electro-dep or water reduced flow-coater should be used.

Findlay has also been working on the application of high solids content paint systems with their Ransburg #2 disc system. They have run about 1000 dryer units through finish paint. Hydrocarbon emissions were reduced by about 92%. The material has been approved for production. Again I strongly recommend that this process be continued into production so that we have a fully tested and operating system for use wherever in the company we are required to go to a non-polluting paint system.

In summary, the situation is that all paint systems which we substantially modify, renovate, renew, replace or add to and all new construction will

Reg or

need to be of a non-polluting type. It will be economically more attractive, easier and ecologically sounder to use an "exempt" (non-polluting) paint system rather than to use a standard system and incinerate or absorb the excess emissions. For primer coat, either the water reduced flow-coat or electro-dep process qualifies as "exempt" or non-polluting. For the finish coat, the high solids content paint used on the Ransburg #2 disc system qualifies as "exempt". The electro-dep is already used at several locations in the company, so no further work is needed on this process. However, both the water-reduced flow-coat paint system and the high solids content paint for use with the Ransburg #2 disc system should be brought into production at one facility so that we have a fully tested and operative system to use when it is needed or when it is advantageous for us to change systems.

I think that all of the people at the divisions who have worked so diligently in the development of new processes are to be commended. Particularly the efforts of the personnel of the Findlay Division for moving ahead as rapidly as they have. Without their efforts we could very well be facing the requirement to incinerate our plant system exhausts, which would be both costly and wasteful to our natural resources.

Thomas H. Goodgame

THG/rmw

N. Wehrmeister (Clyde) cc:

H. Manning (Clyde)

R. Robinson (Danville)

W. Davis (Ft. Smith)

R. Mayer (Lewisburg)

R. Kober (LaPorte)

C. Comstock (Marion)

L. Vachon (Marion)

V. Mix (St. Joseph)

E. Hartung (St. Paul)

L. McGaughey (St. Paul)

R. Plante

T. Miranda

J. McGill

D. Robach

J. Sangerl∞

Info Center, File 15777

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SITE NAME: PIG EYE LANDFILL	DCN: 00458_
1 1 .	= PAGES: 2
DATE: 1/20/17	SOURCE:
AUTHOR: TH. GOODGAME	
RECIPIENT: E A. BAUFF	<u> </u>
TITLE: MUMO	- diccuse
SUMMARY: This document 15	a memo union states
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E.A. Baillif:

At the second corporate environmental control meeting held at Findlay on December 16, 1971, it became apparent that there was considerable misunderstanding both by some of the participants, and by others who were directly and managerially concerned with the product performance, marketing and plant operations as to the reasons for our needs for non-polluting paint systems.

The attached memorandum attempts to put this need in proper perspective. A brief summary of the conclusions arrived at follows:

First, there are only two operating divisions (St. Paul and Evansville) which are likely to be required to modify their existing systems to reduce hydrocarbon emissions. It is too early to predict how far they will have to go, but the requirements will be made between now and mid-1975.

Second, new construction at all Divisions will be required to be a non-polluting, or "exempt", system, whether this new construction be a separate plant, or an addition to a present plant.

Third, substantial modifications of existing paint systems will in all probability result in a requirement to reduce emissions to the equivalent of a non-polluting, or exempt, system. A "substantial modification" of a system might be defined as replacement, or renewal, or it might include only an increase in chain speed. A non-polluting, or exempt, paint system has been approximately defined as one which emits only 10% of the hydrocarbons emitted by standard processes, e.g., our hydrocarbon flowcoat and Ransburg systems. Examples of non-polluting systems which satisfy our requirements are:

1) Electro-dep

2) Water-reduced flow coat, and

3) High solids paints for Ransburg disc application

It is my opinion that we can best achieve the requirement for non-polluting paint systems by the use of systems which reduce the amounts of hydrocarbons used by 90% or more. We need these systems immediately as the states will begin to require permits for "new construction" and "substantial modifications" within the next few months.

Jon Josef Jun T. H. Goodgame

THG:ra

cc: To Distribution (Attached)

Distribution:

Stanley Stokes
Wm. Adams
Kenneth Leimgruber
Richard Coleman
Victor Campbell
Rudy Mayer
Conde Maiden
James Trapp
Kenneth Buehlmann
Wesley Caple
Paul Bowman
W. Hall
S. Pekol

(Clyde)
(Danville)
(Evansville)
(Findlay)
(Ft. Smith)
(Heil Quaker)
(John Inglis)
(LaPorte)
(Marion)
(St. Joseph)
(St. Paul)
(Thomas Organ)
(Warwick)

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January 21, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall St. Paul, Minnesota 55102

Attention: Dennis J. Grittner

Senior Wastes Technician

Re: Sewer Charge Adjustment on Boiler Water Usage for September, October, November and December of 1971

Dear Dennis,

Enclosed please find the information that you will require to process a sewer charge adjustment for our Boiler Feedwater Usage, during the last four months of 1971.

I understand that you will do the calculation of the dollar amounts to be refunded.

If you have any questions or require additional information, please contact me at 776-8511.

Yours truly,

E. W. Hartung Plant Engineering

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RECIPIENT: E.W. HARTUM WHIE	UP
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RICHARD A. SCHNARR
Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS 234 City Hall & Court House 55102

ROGER M. CONWAY
Commissioner

January 31, 1972

E.W. Hartung Plant Engineering Whirlpool Corporation 850 Arcade Street St. Paul, Minnesota

Dear Mr. Hartung:

St. Paul Ordinance 18.05 (10b) states in part that...."the storm and clear water drainage system from such building or premises shall (emphasis added) be connected to the public storm sewer within one year after notification from the Bureau of Public Buildings that such public storm sewer is accessible. The date that a newly installed public storm sewer becomes accessible shall be determined by the Department of Public Works."

I have checked with our Construction Department and they estimate that the storm sewer will become available about March 1, 1972.

I trust this letter will meet your requirements.

Yours very truly,

Daniel J. Dunford

Sewer Engineer

DJD/DJG/kw



RICHARD A. SCHNARR
Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS 234 City Holl & Court House 55102

ROGER M. CONWAY

Commissioner

January 31, 1972

E.W. Hartung
Plant Engineering
Whirlpool Corporation
850 Arcade Street
St. Paul, Minnesota

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I trust this letter will meet your requirements.

Yours very truly,

Daniel J. Dunford

Sewer Engineer

DJD/DJG/kw

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RICHARD A. SCHNARR Chief Engineer

CITY OF SAINT PAUL

Capital of Minnesota

GARY R. NORSTREM
Deputy Commissioner

DEPARTMENT OF PUBLIC WORKS

234 City Hall & Court House 55102

ROGER M. CONWAY

Commissioner

February 2, 1972

Mr. Ed Hartung Facilities Engineer Whirlpool Corporation St. Paul, Minnesota 55106

Dear Ed:

Please find enclosed my calculation of Whirlpool's sewer service charge refund for September through December, 1971. Upon receiving a signed copy of this, I will process the refund of \$1064.48. I have also enclosed a copy of the 1972 sewer rates for you to use in computing future refunds.

Yours very truly,

William L. Tschida Sewer Design Division

WLT/bp

Enc.

Ŏ Jojan <u>th</u>	Feedwater Gallons	Cu. Ft.	95% Cu.Ft.	Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg. for Act Use	Amount Billed On Sewer Bill	
September	1,711,000	228,743.30	217,300	5,470	3,297	670.49	1,021.10	
October	1,126,000	150,534.70	143,000	3,301	1,871	394.20	671.17	
November	1,037,000	138,636.30	131,700	1,988	671	147.62	417.60	
December _	1,011,000	135,160.40	128,400	6,717	5,433	1,016.29	1,183.21	rajaayirita diirayaya
		,			TOTALS	\$2,228.60	\$3.293.08	. '

\$3,293.08 - 2,228.60 \$1,064.48 TOTAL REFUND FOR SEP-DEC 1971

SIGNED MHATUNG) FACILITIES ENGINEER WHIRLOOL CORPORATION

1972 BOILER FEED TER USAGE 4" Meter 838 Arcade Street

/Month	Boiler Meto Feedwater Gallons	Cu. Ft.	95% Cu. Ft.	City Meter Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg. for Act Use	Amount Billed On Sewer Bill
January	1,237,000	165,352.2	157,085	4,562	2,991	\$658.06	\$ 964.59
February	1,367,000	182,729.5	173,593	2,921	1,185	269.78	643.02
March	1,320,000	176,446.9	167,625	2,892	1,215	276.23	636.78
April	1,280,000	171,100.1	162,545	2,954	1,328	300.52	650.11
May	1,197,000	160,005.3	152,005	2,558	1,037	237.96	564.97
June	1,102,000	147,306.5	139,941	3,646	2,246		785.97
July		·				2240,44	4245.44

August

September

October

November

December

TOTAL REFUND FIRST 6 MONTHS 1972 - 2,005.00

E. W. Hartung Facilities Engineer

1971 BOILER FEEDWATER USAGE 4" Meter 838 Arcade Street

<u>Month</u>	Boiler Meter Feedwater Gallons	Cu. Ft.	95% Cu. Ft.	City Meter Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg.for Act Use	Amount Billed On Sewer Bill
January	1,232,000	164,705.88	156,500	1,462	-	-	\$ 312.40
February	1,087,000	145,320.86	138,100	322,160	1,737	\$367.40	657.57
March	1,548,000	206,951.87	196,600	2,696	730	160.60	559.20
April	1,327,000	177,406.42	168,500	6,400	4,715	911.55	1,142.00
May	1,686,000	225,401.07	214,100	13,866	11,725	1,782.50	1,996.60
June	1,926,000	257,486.64	244,600	4,811	2,365	493.00	927.87
July	1,179,000	157,620.32	149,700	4,509	3,012	622.04	876.53
August	1,446,000	193,315.51	183,600	4,431	2,595	539.00	863.27
Septemb er	1,711,000	228,743.30	217,300	5,470	3, 297	670.49	1,021.10
October	1,126,000	150,534.70	143,000	3,301	1,871	394.20	671.17
November	1,037,000	138,636.30	131,700	1,988	671	147.62	417.60
December	1,011,000	135,160.40	128,400	6,717	5,433	1,016.29	1,183.21
					<i>\$</i>	7,104.69	10,628.52

TOTAL REFUND FOR 1971 = 3523.83 QUA

E. W. Hartung Facilities Engineer

1972 BOILER FEEDWATER USAGE 4" Meter 838 Arcade Street

Month	Boiler Mete Feedwater Gallons	Cu. Ft.	95% Cu. Ft.	City Meter Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg. for Act Use	Amount Billed On Sewer Bill
January	1,237,000	165,352.2	157,085	4,562	2,991	\$658.06	\$ 964.59
February	1,367,000	182,729.5	173,593	2,921	1,185	269.78	643.02
March	1,320,000	176,446.9	167,625	2,892	1,215	276.23	636.78
April	1,280,000	171,100.1	162,545	2,954	1,328	300.52	650.11
May	1,197,000	160,005.3	152,005	2,558	1,037	237.96	564.97
June	1,102,000	147,306.5	139,941	3,646	2,246	497.89	785.97

July

August

September

October

November

December

E. W. Hartung Facilities Engineer

1971 BOILER FEEDWATER USAGE 4" Meter 838 Arcade Street

Month	Boiler Meter Feedwater <u>Gallons</u>	Cu. Ft.	95% Cu. Ft.	City Meter Consumption 100 Cu. Ft.	Act Use 100 Cu. Ft.	Chg.for Act Use	Amount Billed On Sewer Bill
Janua ry	1,232,000	164,705.88	156,500	1,462	-	-	\$ 312.40
February	1,087,000	145,320.86	138,100	322,160	1,737	\$367.40	657.57
March	1,548,000	206,951.87	196,600	2,696	730	160.60	559.20
April	1,327,000	177,406.42	168,500	6,400	4,715	911.55	1,142.00
Мау	1,686,000	225,401.07	214,100	13,866	11,725	1,782.50	1,996.60
June	1,926,000	257,486.64	244,600	4,811	2,365	493.00	927.87
July	1,179,000	157,620.32	149,700	4,509	3,012	622.04	876.53
August	1,446,000	193,315.51	183,600	4,431	2,595	539.00	863.27
September	1,711,000	228,743.30	217,300	5,470	3, 297	670.49	1,021.10
October	1,126,000	150,534.70	143,000	3,301	1,871	394.20	671.17
November	1,037,000	138,636.30	131,700	1,988	671	147.62	417.60
December	1,011,000	135,160.40	128,400	6,717	5 , 433	1,016.29 7,104.69	4 1,183.21 10,628.52

TOTAL REFUND FOR 1971 = 3523,83

Rec 1971 patiell 62-5516 four the lung 1971 2,459.35

E. W. Hartung % 62-6516 Sept the Dec 1971 1,064.48
Facilities Engineer

3(23.83)

3,523.83

Roco 1/1/12

1,2 32,000 m. 1,327,171 1711 000 1926 vn 1179 on 1446 m 1126,000 0 77 M 379,000 MARCO CO 1237 000 192,000 67 609,000 1197 on #1. DEC 374,000 800,000 VAN 600,000 737,000 400,000 192,000 FEB 609,000 400,000 MAR 990,000 708,000 APR, 499,000 MAY 011,000 811,000 JUNE 800,000

MONTH OF APR 19 72

Well 323 Well 484 City Supply 6" Sparling 16377 8" Sparling 37997 4" Her. C. 3032084 852 Arcade St. 837 Arcade St. 838 Arcade St. I. WELLS A) TOTAL CONS Well 323 Cons + Well 484 Cons · 50090 CCF B) TOTAL CLEARWATER Bldg. 17 + Bldg. 21 GALS ... 32805.216 · 748 (Date: From 3-16-72 to 4-28) · CCF c) FACTOR Total Clearwater 0.8756 Total Well Cons D) CLEARWATER DISTRIBUTION CCF (Well 484 Cons) X (Factor) 26686 _CCF E) ADJUSTED CONS (Well 323 Cons) - (Well 323 "D") 2440 CCF (Well 484 Cons) - (Well 484 "D") . . . CCF F) ADJUSTED CHARGE G) ORIGINAL CHARGE Well 323 + Well 484 8363,50 TOTAL WELL REFUND . (G-F)

11.	CII	I Y , SUPPLY
	A)	TOTAL FEEDWATER
		(Date: From to) 1600 CCF
	в)	95% TOTAL FEEDWATER
	c)	TOTAL CONS
	D)	ADJUSTED CONS
	E)	ADJUSTED CHARGE
	F)	ORIGINAL CHARGE
	G)	TOTAL CITY SUPPLY REFUND \$ 326.80 (F-E)
111.	T0	TAL REFUND
	We	11 Refund (I-H)
	+	City Supply Refund (11-G)
		\$ 3984.07
		SIGNED
		TITLE
		DATE

1.1 •	CHI	Y SUPPLY						
•	A)	TOTAL FEEDWATER			1/2	80,000	GALS :	748
		(Date: From	to) .		1711	CCF	
	B)	95% TOTAL FEEDWATER		• • • • • •		1626	CCF	
	c)	TOTAL CONS				2954	CCF	
	D)	ADJUSTED CONS (C-B)	• • • •	•	• •	1328	CCF	
	E)	ADJUSTED CHARGE			\$	300.5	52	
	F)	ORIGINAL CHARGE			\$	650.1	1	
	G)	TOTAL CITY SUPPLY REFUND (F-E)			\$	349.5	59	
111.	ТО	TAL REFUND				,		
	We	11 Refund (I-H)		• • • • •	\$	7009.0	<u>e5</u>	
	+	City Supply Refund (II-G)			\$	349.	59	
			٠		\$	7359.	24	
		•						٠
							•	
					·			
•								
			SIGNED		·			
			TITLE					
	•		DATE			· · · · · · · · · · · · · · · · · · ·		
		4.4						

MONTH OF MAR 19 72

611	Spar	1 323 -ling 16377 cade St.		Well 484 S'' Sparling 37 37 Arcade St.		City 4" Her. C. 838 Arcade		
1.	1.1 F.L	N/A			·			
	A)	TOTAL CONS						
		Well 323 Cons	+ Well 484	Cons				CCF
	в)	TOTAL CLEARWA	TER					
		Bldg. 17 + Bl	dg. 21			•		GAL:
		(Date: From _		to)			- 748 - CCF
	c)	FACTOR				•	,	•
		Total Clearwa Total Well Co		• • • • •		•		· -
	D)	CLEARWATER DI	STRIBUTION					
		(Well 323 Cons) X (Factor)			•	·	_
		(Well 484 Cons) X (Factor)		• • • • • •	•	·	_
	E)	ADJUSTED CONS	•			•		
		(Well 323 Con	s) - (Well 3	23 "")		•	· · · · · · · · · · · · · · · · · · ·	CCF
		(Well 484 Con	s) - (Well 4	84 "")		•		CCF
	F)	ADJUSTED CHAR	GE .					
		Well 323 + We	11 484			\$		_
	G)	ORIGINAL CHAR	GE					
		Well 323 + We	11 484			\$		
	н)	TOTAL WELL RE	FUND			\$		=

11.	CIT	Y SUPPLY
	A)	TOTAL FEEDWATER
		(Date: From to) 1765 CCF
	в)	95% TOTAL FEEDWATER
	c)	TOTAL CONS
	D)	ADJUSTED CONS
	E)	ADJUSTED CHARGE
	F)	ORIGINAL CHARGE
	G)	TOTAL CITY SUPPLY REFUND
111.	TO	TAL REFUND
	We	11 Refund (I-H)
	+	City Supply Refund (II-G)
		\$ 360.34
	•	
		SIGNED
		TITLE
		DATE

MONTH OF FEB

19 72

6" Spa	ll 323 arling 16377 rcade St.	Well 484 8" Sparling 37997 837 Arcade St.	City Supply 4" Her. C. 3032084 838 Arcade St.	
1. W	ELES NA/A			
A)) TOTAL CONS			
	Well 323 Cons + We	11 484 Cons		CCF
В) TOTAL CLEARWATER			
	Bldg. 17 + Bldg. 2	1	• •	_ GALS
	(Date: From	to)		- 748 - CCF
c)) FACTOR		•	-
	Total Clearwater Total Well Cons	· · · · · · · · · · · · · · · · · · ·	• •	
מ) CLEARWATER DISTRIB	UTION		
	(Well 323 Cons) X (Factor)		_
	(Well 484 Cons) X (Factor)	• • •	
Ε) ADJUSTED CONS			
	(Well 323 Cons) -	(Well 323 "D")	• •	_ CCF
		(Well 484 "D")	• •	CCF
F				- .
	Well 323 + Well 48	14	\$	
G				
	·	34	\$	
н	·	• • • • • • • • • • • • • •		

11.	CIT	Y SUPPLY		
•	A)	TOTAL FEEDWATER		; :
		(Date: From	to) <u>1828</u> CCF	
	в)	95% TOTAL FEEDWATER		
	c)	TOTAL CONS		
	D)	ADJUSTED CONS (C-B)		
	E)	ADJUSTED CHARGE	\$ 269.56	
	F)	ORIGINAL CHARGE	\$ 643.02	
	G)	TOTAL CITY SUPPLY REFUND (F-E)	\$ <u>373,46</u>	
111.	TO	DTAL REFUND		
	We	ell Refund (I-H)		
	+	City Supply Refund (II-G)	<u>\$ 373.46</u>	
			\$ 373.46	
			SIGNED	
			TITLE	
			DATE	

	MONTH OF JAN 19 72	
6" Spar	323 Well 484 City Supply ling 16377 8" Sparling 37997 4" Her. C. 3032084 ade St. 837 Arcade St. 838 Arcade St.	
I. WEL	KS N/A	
A)	TOTAL CONS	
	Well 323 Cons + Well 484 Cons	CCF
в)	TOTAL CLEARWATER	
	Bldg. 17 + Bldg. 21	GAL
	(Date: From to)	÷ 748 • CCF
c)	FACTOR	
	Total Clearwater	-
D)	CLEARWATER DISTRIBUTION	
	(Well 323 Cons) X (Factor)	<u>.</u>
	(Well 484 Cons) X (Factor)	-
E)	ADJUSTED CONS	
	(Well 323 Cons) - (Well 323 "D")	_ CCF
	(Well 484 Cons) - (Well 484 "D")	_ CCF
F)	ADJUSTED CHARGE	
	Well 323 + Well 484	
G)	ORIGINAL CHARGE	
	Well 323 + Well 484	
н)	TOTAL WELL REFUND	

: 748

н.	CIT	Y SUPPLY
	A)	TOTAL FEEDWATER
		(Date: From to) 1654 CCF
	B)	95% TOTAL FEEDWATER
	c)	TOTAL CONS
	D)	ADJUSTED CONS
	E)	ADJUSTED CHARGE
	F)	ORIGINAL CHARGE
	G)	TOTAL CITY SUPPLY REFUND
111.	TO	TAL REFUND -
	We	11 Refund (I-H)
	+	City Supply Refund (II-G)
		\$_306.53
		SIGNED
		TITLE
		DATE

February 7, 1972

Date:

APPLICATION FOR DISPOSAL SYSTEM PERMIT

Minnesota Pollution Control Agency Division of Water Quality 717 Delaware Street S. E. University of Minnesota Campus Minneapolis, Minnesota 55440

Gentlemen:
It is requested that in accordance with the applicable provisions of the
state water pollution control statutes, as amended, a permit be issued for con-
struction and operation of (sewage) (industrial waste) (other waste)* disposal Clear Water works, and for discharge of (sowage) (industrial waste) (other waste) effluent.**
The disposal system is to serve Whirlpool Corporation, 850 Arcade Street,
St. Paul, Minnesota , in Ransey County .
The project will consist of 2 - Discharge outfalls connected to the
City of St. Paul's Phalen Creek Clear Water Sewer, which empties into the
Mississippi River. Metering will be provided on each discharge, as per
attached sketches. The discharge is cooling water only, which source is deep
well into Jordan Strata. (Analysis attached)
Specific Location of Project: Bldgs. 21 & 17 of Whirlpool Corp., 850 Arcade Street
Further information and design data on the project are provided in an en-
gineering report or summary dated 1-21-72 which is at-
tached. Construction plans and specifications on the disposal system (are in-
cluded) (mill be sent superately).

** Strike out any items, phrases in parenthesis, or other which may not be

* As defined in MSA, Section 115.01.

applicable to your situation.

MPCA 214.1

1. Need for project as requested by City of St. rauf in their letter
of January 31, 1972.
· · · · · · · · · · · · · · · · · · ·
2. Currently projected ultimate development of the area and/or industria
plant capacity to be servedN/A
and projected use period of system as proposed N/A
3. Name, uses and general condition of waters of the state into which the
system effluent, if any, is to be discharged: The cooling water effluent will
be discharged into the City of St. Paul Phalen Creek Clear Water Sews
which eventually discharges into the Mississippi River.
4. File number and date of previously approved plans, if any N/A
5. Estimated total cost of disposal system \$90,000.00
6. Projected ultimate maximum discharge rate 750,000 Gal./Day
If request is for temporary, interim, or experimental operation and/or
discharge permit, or other type rather than permanent permit, so indicate with
justification or need for the same and attach supporting project summary or en
gineering data: Permanent Installation

' ,

Is request for permit for operation of existing disposal works? YesNo_X
If so, are monthly effluent and operation reports being furnished regularly?
Yes No X . If Yes, please list the names of the persons responsible for
operation and maintenance of the disposal system:
I certify that the above described project (has been) (will be) completed
as described in the (plans and specifications) (project summary) (approved by)
(submitted to) the Minnesota Pollution Control Agency and on file in their of-
fices and that the facilities (are operating) (will be operated) as designed
and in accordance with any special conditions which have been or may be imposed
in the permit or in any applicable criteria, standards or regulations of the
Agency.
Signature Signature
(Type in) WHIRLPOOL CORPORATION, 850 Arcade Street, St. Paul, Minnesota 55106
Name and Address of Project Engineer Date
Signature
(Type in)
Name, Title and Address of Municipal or Industrial Official Date

·. · 5.

SITE NAME: PIG EYE LANDFILL	DCN: 00081
	= PAGES:
DATE: 2-6-72	SOURCE.
AUTHOR: WILLIAM E. MOOYE	COSTPA-BCPL OZ Public Utili
RECIPIENT:	
TITLE BUILDIN Re: Ope	ratine Pernuts & Emission
SUMMARY: MIS-downent 15 a	bulletin which inherior
States in accordance	with MPCA RESULATIONS
COSTPA - BUREAU Of air	- POILUTION CONTROL ASENCY
has responsibility	of compiling annual
INVERNIMATION OF CITY	pollution emmissons ?
1551/We Operative	Permits. The document
licate 2 distances	types of Operating
PERMAN CHAST ON AM	HILL MANDER OF
vermus, and exam	Kan y John d with the
IMMENTAD THAT	- book neid permits
PRP's	
TRANSPORTERS	
CODED BY ENTERED BY QABY	



100 EAST TENTH STREET

(**612**) 223-5521

SAINT PAUL, MINNESOTA 55101

BULLETIN

February 8, 1972

SUBJECT: Operating Permits & Emission Inventory

In accordance with Minnesota Pollution Control Regulations, this Agency has the responsibility of compiling an annual inventory of all significant sources of air pollution emissions and issuing Operating Permits for those facilities found to be adequately controlled.

There are three (3) types of Operating Permits classified according to the kind of source:

- I. Boilers and other heating apparatus consuming any amount of any kind of fuel except natural gas, liquified petroleum gas, and No. 1 or 2 fuel oil.
- II. Incinerators with a capacity of 100 pounds per hour or greater.
- III. Any separate and independent process which can emit air pollutants of any kind, such as, but not limited to the following:
 - a) dust or other particulate matter
 - b) smoke or other visible emissions
 - c) toxic gases or vapors
 - d) solvent or other hydrocarbon vapors
 - e) odorous particulates, gases, or vapors

An example of such a process might be a production line which has several operations emitting pollutants (e.g. particulates from grinding, solvent vapors from painting, odors from baking, etc.) but can function only when all such operations are performed simultaneously.

From the above, it is obvious that many establishments might require several Operating Permits. However, in order to eliminate unnecessary paper-work, blanket permits will be issued to cover several or all sources whenever such action is considered justified by this Agency.

Thank you for your cooperation.

Jullain E. Mare

William E. Moore, Engineer

WEM/mc

CITY OF SAINT PAUL BUREAU OF AIR POLLUTION CONTROL

00682

100 E. 10TH STREET

(612) 223-5521

SAINT PAUL MN 55101

ADDRESS: <u>850 ARCAU</u> PERSON TO CONTACT: <u>F.W.F</u>	ARTUNG	PRPORATION TELEPHONE NO: <u>776-8511</u> TITLE: <u>FACILITIES ENGI</u> NE
TYPE OF OPERATION: MANUE		A
FUELS BURNED: (CHECK) NONE NATURAL GAS LIQUIFIED PETROLEUM GAS FUEL OIL #1 FUEL OIL #2	X VENDOR: VAL	DEL OIL #6 21005 HORSEPOWER, OR 139,310,000 BTU/HOUR MAX.
WASTE DISPOSAL: (CHECK) NONE INCINERATOR	HAUL-A-WAY SER OTHER (SPECIFY	
EMISSIONS PRODUCED DURING RE NONE DUST FUMES SMOKE AEROSOLS	ODORS:(SPECIFY)	EFORE RELEASE TO ATMOSPHERE?
NONE CLEANING FLUIDS APAINTS	ORGANIC LIQUIDS USED IN R	EGULAR OPERATIONS:(CHECK)
LACQUERS ADHESIVES INK	YES X NO	RE RELEASE TO OUTSIDE ATMOSPHERE?
INCINERATOR OVEN	IEATING: X STEAM: X PRO I X DRY CLEANING R X VAPOR DEGREA	INIT
BUILDING VENTILATION: (CHECK NATURAL (THRU WINDOWS)) FORCED VENTILATION _>	∠ MECHANICAL EXHAUST ∠
POLLUTION CONTROL EQUIPMENT AFTERBURNERSTAC	(INDICATE NUMBER OF UNITS: K ELECTRONIC PI RBER CYCLONE SEPA ER Z MIST ELIMINA	RECIPITATOR 3
SCRUBBER 3 ADSC BAG FILTER 4 FILT OTHER: (SPECIFY)	EN MIST ELIMINA	:

DCN: 00U83_ SITE NAME: PIG EYE LANDFILL = PAGES: DATE: 2-18-72 SOURCE. AUTHOR: WHRLP TITLE: WHIRLP Application for permit to discharge SUMMARY: Mis downent is a unirip application for a permit to discharge into haviaged Nators Phalen Creek WHRUP PRP's FRANSPORTERS CODED BY ENTERED BY QABY

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

			·				
2527011 05115 11 1152011 7:01	. 1	. State Application	Number (to be assign	ed by Corps of Engineers)			
SECTION I. GENERAL INFORMATION	j ₋	Div.	Dist. Type	Sequence No.			
2. Name of applicant and title of signing official	hirlpool Corp	oretion					
			igaration & I	aundry Products			
	roup vice rie	sident, keili	igeracion & L	adiaty froducts			
3. Mailing address of applicant	hirlpool Co	ornoration					
	dministrati						
	Senton Harbo		-				
	· encon ination	u	WI-40022				
4. Name, address, telephone number and title of applic	ant's authorized agent	for permit applicatio	on coordination and co	orrespondence.			
	hirlpool Co						
	t_Paul_Div						
	SO Arcade S	Street					
	t. Paul, Mi	inn 55106					
	112-776-851	<u> </u>		- 			
Attn: F	.W. Hartung	, Faciliti	es Enginee	r			
NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form. Required Information a. All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged information. b. The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application. c. If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply. d. Drawings required by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 of Section II below), the additional information sheet(s) in "c" above, and the confidential information. An additional \$50 is required for each additional point of discharge or deposit. Signature a. If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been desi							
Application is hereby made for a permit or perm contained in this application, and that to the bes							
18 U.S.C. Section 1001 provides that:		Signature	e of Applicant				
Whoever, in any matter within the jurisdiction of covers up by any trick, scheme, or device a mate or uses any false writing or document knowing sthan \$10,000 or imprisoned not more than five y	rial fact, or makes any ame to contain any fal	false, fictitious or fra	audulent statements o	r representations, or makes			
FO	R CORPS OF ENGIN						
Acronym name of applicant	· Ar	e discharge structures	s en				
Data associated for the state of the	<u>—</u> Ма	ajor? M	inor?	N/A?			
Date received, form not complete — — - Date received, form complete							
but without certificate		ite sent to EPA, form					
Date received, form complete — — - Date of Cert./Ltr. — — -	Da	ate sent to EPA, NOA. FPC in complete for					
Date of Cert./Ltr day	mo yr		day	mo yr			
ENG/FORM A345		(Page 1 of 3			

MAY 71

5, Da	Feb. 18 1972		(Office uso only)		
· [mo day yr				
6. Ch	neck type of application:		7. Number of original	application	
	a. Original	b. Revision .		*	•
B. Na	ome of facility where discharge or construction will occu	r.			
	Whir	lpool Corpor	ation		
			n		
					<u> </u>
9. Fu	III mailing address of facility named in item 8 above.	·	·		
	Whir	lpool Corpor	ation		
-	St. J	Paul Divisio	n		
	850_7	Arcade Stree	ŧ		
Ì			55106		
10. N	lames and mailing addresses of all adjoining property ow			Mlr	nesota 55]
	East - City of St. Paul,	City Hall,	15 W. Kellog	a_BlvdS	St. Paul
Sduth	& West - Burlington Norther	n Inc., 176	E. 5th St.	St. Paul,	Minn 55
· L	tt tt	11 11		u u	11 1
					· .
				· · · · · · · · · · · · · · · · · · ·	
11. C	heck to indicate the nature of the proposed activity:				
	a. Dredging b. Construction	c. Construction v	with Discharge X	b. Discharge	only
12. 11	f activity is temporary in nature, estimate its duration in	months.			
	Permanent				
If.	application is for a discharge:				
12.1	ist intake sources	•		•	
13. 6	ist intake sources			ABT LAY YEAR	365042
	Source		d Volume in Million Per day or Fraction	YEAR	YEAR
			Thereof 6	11/	a Ch.
1	Municipal or private water supply system		11.	61/zn.	1-741,
}	Surface water body Ground water		1 . 1 7	275/m.	427/m
1	Other			- 7 9	17
1					
14.0	escribe water usage within the plant				
	Туре		d Volume in Million Per day or Fraction		
			Thereof	121/01	27/1/2/1
	Cooling water		 유·슈 카	Stan	~ 17/1
	Boiler Feed water Process water		$\frac{0}{0}$, $\frac{1}{6}$	143 /24	7 2 2
1	Sanitary system*		0 .0 5	3	400 C
.	Other			17 7	1,8
15. Li	ist volume of discharges or losses other than into navigal	ble waters.			
			d Volume in Million		
	Туре		Per day or Fraction		
1	•• •• • • • • • • • • • • • • • • • • •		Thereof 0 6 6	155/y.	
	Municipal waste treatment system Surface containment	. ——			•
1	Underground disposal				
	Waste Acceptance firms			•	
	Evaporation		0 0 2	5/m.	
	Consumption			• ()	
j		_			
	 Indicate number employees served per day 	180	10		
15					
ــــــــــــــــــــــــــــــــــــــ					

Page 3 of 3

· <u></u>	
If structures exist, or dredging, filling or other construction will occur, the precise location of the activity must be described.	(Office use only)
a. Name the corporate boundaries within which the structures exist or the activity will occur.	
State County	City or Town
16. Minnesota 17. Ramsey	18. St. Paul
b. Name of waterway at the location of the activity	
19.—Phalen Creek Clear Water Sew	-
20. Maps and sketches which show the location and character of each structure of and non-structural points of discharge, must be attached to this application.	activity, including any and all outfall devices, dispersive devices,
21. For construction or work in navigable waters for which a separate permit is so fully shown on detailed plans to be submitted with this application. Note on tion (Section II of this form) has been submitted.	
22. List all approvals or denials granted by Federal, interstate, State or local agend described in this application.	cies for any structures, construction, discharges or deposits
Type of document Id. No.	Date Issuing Agency
a) Letter - permission to discharge into Phale 4	/4/71 Dept. of Pub.Wks, City of St.Peu
b) Letter - Meeting notice 5/21/71 City Counci	
c) Letter - reltiave to discharge into Phalen	City of St. Paul
d) Letter - availability of Phalen Creek sewer	
	Dept. of Pub.Wks, City of St. Paul
	,
	·
	1970. X
23. Check if facility existed or was lawfully under construction prior to April 3,	1970.
24. If dredging or filling will occur:	
State the type of materials involved, their volume in cubic yards, and the pro-	posed method of measurement.
·	· -
Not Applicable	
	· ·
	•
25. Describe the proposed method of instrumentation which will be used to meadetermine its effect upon the waterway.	sure the volume of any solids which may be deposited and to
Not Applicable	
No Solids Discharged Clear C	ooling Water Only
No boiles bischarged crear c	ooling nater only
	· · · · · ·
26. State rates and periods of denosition described in Item 25	· · · · · · · · · · · · · · · · · · ·
26. State rates and periods of deposition described in Item 25.	
Not Applicable ·	
γ	

ENG FORM

FORM APPROVED OMB NO. 42-R 0408

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

•	1. State	Application Number	er (to be assigned	d by Corps	of Engineers)
SECTION I. GENERAL INFORMATION		Div. Dist.	 Туре	 Seguen	 ce No.
2. Name of applicant and title of signing official Whirlpo	ool Corporation	on.			
	ice Presiden		ition & La	undry I	Products
3. Mailing address of applicant					
Whirly	pool Corpor				
	istration_C				
Bentor	Harbor, M	ichigan_4	9.0.2.2		·
		·			
4. Name, address, telephone number and title of applicant's auth					
	pool_Corpor				
	aul Divisio				
	ccade Stree				
	. •				
	Hartung, Fa				· · · · · · · · · · · · · · · · · · ·
NOTE TO APPLICANT: Refer to the pamphlet entitled "Permi	•		_		
before attempting to complete this for Required Information					•
mercial or financial information of a confidential nature. The fidential treatment can be considered only for that information attached sheet. However, in no event will identification of information. b. The applicant shall furnish such supplementary information. c. If additional space is needed for a complete response to an that sheet the item numbers to which answers apply. d. Drawings required by items 20 and 21 should be attached the fapplicable, copies of a water quality certification or a which applicable, copies of a water quality certification or a which are not should be attached the fapplicable, copies of a water quality certification or a which application the additional information sheet(s) in feet. Fees If any discharge or deposit is involved, an application submitted by a conditional point of discharge or deposit. Signature a. If a discharge is involved, an application submitted by a connection of the rank of corporate vice president or above by the principal executive officer to make such application the application must be signed by a general partner or the paper of the principal executive officer to make such application the application must be signed by a general partner or the paper of the principal executive officer to make such application the application must be signed by a general partner or the paper of the principal executive officer to make such application that application must be signed by a general partner or the paper of the pa	the contents and frequency item on this form, a to this application. Or itten communication in "c" above, and the confession must be signly who reports directly as on behalf of the coproprietor. Other signly the applicant or his	ific written request uency of a discharge. District Engineer ittach a sheet entitle her papers which me which describes wa onfidential informative with this applicate with this applicate such principal experation. In the capture requirements authorized agent.	of confidentialie be recognized in order to evaluated "Additional I must be attached ter quality impartion sheet described ication. An additional I executive offic secutive offic rese of a partnershare discussed in retify that I am factors	ty has been as confiden ate fully an information to this app ct (see Item libed in "a" tional \$50 in the pamph amiliar with	in made on the ntial or privileged in application. In," Indicate on lication include in 22 and Item 10 above. Its required for each corporation or by its been designated a proprietorship, liet.
		Signature of Ap	unlicant		
18 U.S.C. Section 1001 provides that:		•			
Whoever, in any matter within the jurisdiction of any depa covers up by any trick, scheme, or device a material fact, o or uses any falso writing or document knowing same to cou than \$10,000 or imprisoned not more than five years, or b	or makes any false, fic ntain any false, fictiti	titious or frauduler	it statements or	représentat	ions, or makes
FOR CORPS Acronym name of applicant		E ONLY go structures Minor?	N/.	۸۶ ۲	
Date received, form not complete	Major?	[minor/]	107.	^'[
Date received, form complyte	Date sent to	D EPA, form not co	mplete		
Date received, form complete — — — —		EPA, NOAA, D/I,	AEC,		
Date of Cert./Ltr. ————————————————————————————————————	— — FPC in c	omplete form	day	mo	
ENG FORM 4345			<u> </u>	P	Page 1 of 3

	5. Date _Fcb. 18 1972	(Office use only)
	mo day yr	
	6. Check type of application: a. Original b. Revision	7. Number of original application
	8. Name of facility where discharge or construction will occur.	
	Whirlpool Corpor	ation
		on
	9. Full mailing address of facility named in item 8 above.	
	Whirlpool Corpor	ation
	St. Fall DIVISIO	20
		55106
•	10. Names and mailing addresses of all adjoining property owners whose property als	so adjoins the waterway.
	East - City of St. Paul, City Hall,	Minnesota 55]
Sc	uth & West - Burlington Northern Inc., 176	E. 5th St., St. Paul, Minn 551
	1	<u> </u>
	11. Check to indicate the nature of the proposed activity: a. Dredging b. Construction c. Construction	with Discharge X
	12. If activity is temporary in nature, estimate its duration in months.	
	Permanent	·
-	If application is for a discharge:	
	13. List intake sources	
		d Volume in Million
	Source Gallons I	Per day or Fraction Thereof
	Municipal or private water supply system	1.2 6_
	Surface water body —— -— -	<u> </u>
	Ground water	
	14. Describe water usage within the plant	·
-		od Materia in Adultina
		d Volume in Million Per day or Fraction
-	Cooling water	Thereof 0 7 5
	Boiler Feed water — — —	
	Process water	06_ 1
	Sanitary system* Other	0_ 0_ 5_
	15. List volume of discharges or losses other than into navigable waters.	
	1	d Volume in Million
	Type Gallons	s Per day or Fraction Thereof
	Municipal waste treatment system	
	Surface containment	
	Waste Acceptance firms	
	Evaporation	_ 0_ 0_ 2_
	Consumption	
	• Indicate number employees served per day	00
	1.4	•

If structures exist, or dredging, filling or other construction will occur, t precise location of the activity must be described.	he (Office use only)
Name the corporate boundaries within which the structures exist or the activity will occur.	
State County	City or Town
^{16.} —Minnesota—— Ramso	18. St. Paul
b. Name of waterway at the location of the activity	•
19. Phalen Creek Clear Water	-
20. Maps and sketches which show the location and character of each structural points of discharge, must be attached to this application.	
21. For construction or work in navigable waters for which a separate perm fully shown on detailed plans to be submitted with this application. No tion (Section II of this form) has been submitted.	nit is sought under 33 U.S.C. 403, the character of each structure must be teen the drawings those structures for which separate discharge informa-
22. List all approvals or denials granted by Federal, interstate, State or local described in this application.	l agencies for any structures, construction, discharges or deposits
Typq of document Id. No.	Date Issuing Agency
a) Letter - permission to discharge into Ph b) Letter - Meeting notice 5/21/71 City Cou	4/4/71 Dopt. of Pub.Wks, City of St.Paul
c) Letter - reltiave to discharge into Phal	len Creek Sewer - 9/27/71 Dept of Pub wks, City of St. Paul
d) Letter - availability of Phalen Creek se	ewer for connection - 1/31/72 Dept. of Pub.Wks, City of St. Paul
6) Letter - relative to certification of Cl	ear Water Discharge from MPCA, 3-3-72.
23. Chack if facility existed or was lawfully under construction prior to Ap	oril 3, 1970.
24. If dredging or filling will occur:	
State the type of materials involved, their volume in cubic yards, and the	ne proposed method of measurement.
	•
	•
Not Applicable	
	·
	·
25. Describe the proposed method of instrumentation which will be used to determine its effect upon the waterway.	o measure the volume of any solids which may be deposited and to
Not Applicable	•
No Solids Discharged Clea	r Cooling Water Only
-	
26. State rates and periods of deposition described in Item 25.	
Not Applicable	

February 22, 1972

TO: T.H. Goodgame

FROM: R.W. Kruggel

SUBJECT: Dilution Probe for Flame Ionization Meter

As you requested, means to supply diluent gas to the dilution probe furnished by you was built up, tested and calibrated. After considering several possibilities, I decided the simplest approach was the best and most direct and elected to furnish the diluent air by means of a diaphragm pump similar to the one used in the Davis Flame Ionization Meter. A Dwyer gas flow meter identical to the one on the Davis instrument is used to measure the flow of diluent air. The pump-flow meter combination was built up by Russ Amundsen and is compact and easily handled. The entire package consists of the Davis Flame Ionization Meter with its gas flow meter, an air pump with its gas flow meter, the dilution probe, and two lengths of 3/16" I.D. Tygon tubing 15 feet long as air and sample lines. This equipment combination was tested and calibrated with the following results:

Ionization Meter Flow Reading LPM	Air Pump Flow Reading LPM	Air/Sample Dilution Ratio	Factor F _M	Factor F _A
2.5	1.1	1/1	2	1
2.5	1.8	2/1	3	2
2.5	2.5	4/1	5	4

where the factors F_M and F_A are used to calculate the actual sample hydrocarbon concentration, Y_S , from the diluted sample concentration actually measured, Y_M , and the diluent air concentration, Y_A , in equation (1):

$$Y_{S} = (F_{M}) (Y_{M}) - (F_{A}) (Y_{A})$$
 (1)

If the hydrocarbon concentration of the diluent air is zero, the equation reduces to:

$$Y_{S} = (F_{M})(Y_{M})$$
 (2)

Or if the Flame Ionization Meter is zeroed on the same air as supplied for dilution, equation (2) would apply with Ys representing the difference in hydrocarbon concentration between the actual sample and the diluent air.

It is important to keep the same sample lines used for the calibration. The flow readings used in the above table are not the actual flow rates in the sample lines because the readings are affected somewhat by the pulsing flow of the diaphragm pumps. Differences in flow resistance will result in different gas meter readings for the same flow rate. Therefore, the calibration reported in the above table is particular to the sample lines used. Changing the sample lines will require recalibration.

The calibration procedure allowed comparisons to be made of adjacent scale readings for the same gas composition. It was noted that the scale factor between adjacent scales differed slightly from those reported in the Flame Ionization Meter Manual. A comparison is included below:

	Scale F	<u>'actors</u>
Scale Readings Compared	Reported	Measured
Scale 2/Scale 1	10.00	12.00
Scale 3/Scale 2	2.50	2.51
Scale 4/Scale 3	4.00	4.60
Scale 5/Scale 4	2.50	2.45
Scale 6/Scale 5	4.00	4.15

The calibration procedure, equation development, data and calculations are discussed in more detail in the attached section.

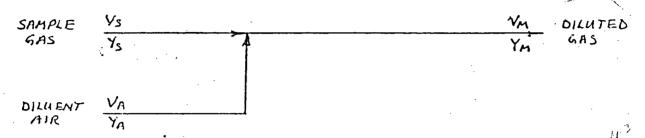
Roy W. Kruggel

RWK/njb

cc: R. Huffman Info. Ctr. (E.O. 2675)

DILUTION PROBE CALIBRATION

Consider the diagram below illustrating dilution:



V is the volumetric flow rate at room conditions Y is the volumetric hydrocarbon concentration Subscript S refers to the actual sample gas A refers to the diluent air

A S

1 = 1 , see - 17

A refers to the diluted gas whose concentration we measure.

$$V_{S} + V_{A} = V_{M}$$

$$Q_{S} + Q_{A} = Q_{M}$$

$$V_{S} Y_{S} + V_{A} Y_{A} = V_{M} Y_{M}$$
(3)

or

$$Y_{S} = (\frac{V_{M}}{V_{M} - V_{A}}) Y_{M} - (\frac{V_{A}}{V_{M} - V_{A}}) Y_{A}$$
 (4)

If we can measure the concentration and flow of air and the diluted gas, we can calculate the actual sample gas concentration by equation 4.

Unfortunately, the diaphragm pumps used to draw the sample and supply the air create cyclic pulses in the gas streams which affect the flow meter readings. The indicated readings, therefore, do not represent the true gas flow rates. The pulses could be partially reduced by a muffler or resonator but the hardware required for the low 29 1/3 cycles per second frequency would be rather bulky.

However, as only 2 or 3 dilution values are required, perhaps the meters could be calibrated at 2 or 3 points if the system geometry is fixed. Accordingly, 15 foot sample lines of 3/16" I.D. Tygon tubing were selected as being suitable for any measuring application. Then if A is the calibrating factor for the flow meter on the flame ionization instrument and B is the calibrating factor for the air flow meter, equation (4) becomes:

$$Y_{S} = \left(\frac{AR_{M}}{AR_{M} - BR_{A}}\right)Y_{M} - \left(\frac{BR_{A}}{AR_{M} - BR_{A}}\right)Y_{A}$$
 (5)

where R is the flow meter scale reading.

If A and B are constant and reproducible at some convenient flow meter scale readings, then we can experimentally determine the factors to use in equation (5) as indicated below:

$$Y_{S} = (F_{M}) (Y_{M}) - (F_{A}) (Y_{A})$$

$$(6)$$

where
$$F_M = \frac{AR_M}{AR_M - BR_A}$$
 and $F_A = \frac{BR_A}{AR_M - BR_A}$

Notice that $F_A = F_M - 1$ so that only one factor need be experimentally determined. This can most conveniently be done by using air with a zero hydrocarbon content $(Y_A = 0)$ so that:

$$F_{\rm M} = T_{\rm C}/T_{\rm M} \tag{7}$$

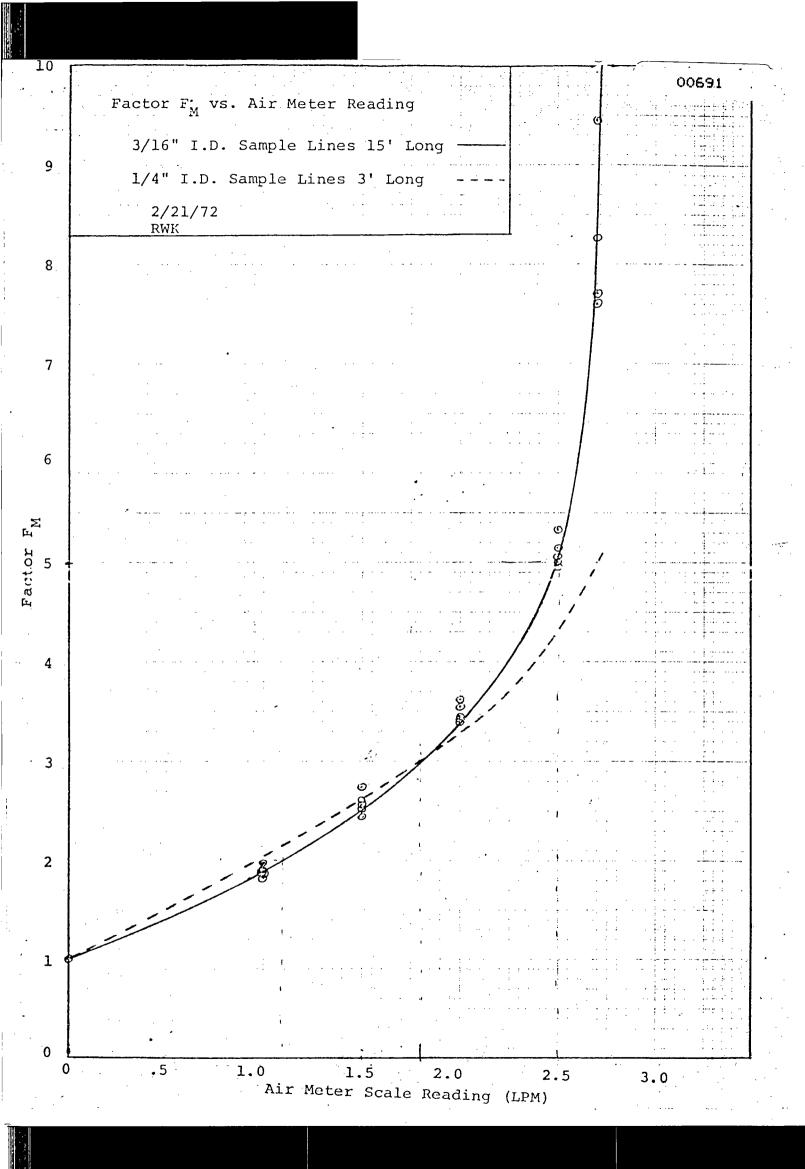
Then by starting with a known gas sample, various diluent air rates can be used, the diluted sample concentration measured and the factor F_M calculated. Actually, the undiluted gas sample does not have to be known. It only has to be maintained at a constant value during the experimental run. This is because the gas concentration is linear with the Davis Flame Ionization Meter reading. The meter reading ratio can therefore be substituted for the concentration ratio in equation (7). This is the technique used for the calibration.

The actual procedure involved filling a plastic bag with a natural gasair mixture, waiting a few minutes for the gases to become thoroughly mixed, and then conducting the experiment. Undiluted gas was first drawn through the Flame Ionization Meter for measurement at a flow reading of 2.5 LPM. Then the air pump was started, the air valve turned on to obtain a reading of 1.0 LPM, and a concentration reading made. The readings were then repeated at air flow meter settings of 1.5, 2.0, 2.5 and 2.7 LPM.

The Flame Ionization flow meter setting was maintained at 2.5 LPM. Finally, the air flow was stopped and the undiluted gas sample reading was taken again to check for a constant composition during the run. Air was then added to the bag and the above procedure repeated.

The factor FM was then calculated for each air flow meter setting for each run and the results plotted in Figure 1. There is some scatter in the data but a representative line fitting the data wery well can be drawn as indicated. This figure was used to obtain the factors presented on page 1 of this memo.

This entire calibration procedure was repeated using 3 foot lengths of 1/4" I.D. Tygon tubing for sample lines. Generally, there was slightly more scatter in the data and the dotted line of Figure 1 obtained (data not shown). This indicates that the gas flow meter calibrations are somewhat dependent on the flow path as suspected. The 15 feet long, 3/16" I.D. sample lines are included with the equipment and should be used for any measurements made in the future. Changing the sample lines will require recalibration if accuracy is important.



850 ARCADE STREET ST. PAUL, MINNESOTA 55106

February 23, 1972

Minnesota Pollution Control Agency 717 Delaware Street S.E. Minneapolis, Minnesota 55440

Attention: Mr. Geo. Koonce

Gentlemen:

Whirlpool Corporation, St. Paul Division, has been requested by the City of St. Paul to discharge waste cooling water into the recently constructed Phalen Creek Clear Water Sewer. I understand an application for this discharge must be made, both through your agency and the Corps of Engineers, St. Paul District. Our discharge water will be clear well water that has been used for cooling equipment, this water is pumped from the Jordan Aquifier, treated with NALCO No. 918 @ 2 P.P.M. and Chlorine @ .5 P.P.M. Estimated discharge quantity is 750,000 G.P.D. This same information has been furnished the Corps of Engineers in the permit application forwarded to them.

Please contact me if you may require any additional information or documentation from Whirlpool Corporation.

Yours truly,

E. W. Hartung

Facilities Engineer

cc: P. Bowmen

A. Holland



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Yours truly,

E. W. Hartung

Facilities Engineer

cc: P. Bowmen

A. Holland

SECTION II. P	PLANT PROCESS AND DISCHARGE DE	SCRIPTION OO693
1. Discharge described below is a. Present	2. Implementation (Office use or	nly)
or changed X	schedule	
Name of corporate boundaries within which the point State	of discharge is located. County	6. Discharge Serial No. City or Town OO1
3. Minnesota	4. Ramsey	5. St. Paul
State the precise location of the point of discharge. 7. Latitude Degrees; Min; Min; Min; The procests are the precise location of the point of discharge.	9. Name of waterway at the Sec. City of St. Pau	
8. Longitude Degrees; Min; _	Clark Water Sew	
10. Has application for water quality certification or d Date		te: NOT REQUITED Tame Issuing Agency
Date	is attached to form	and taking Agency
mo day yr	. —	
11. Narrative description of activity (include terms of	general 4-digit Standard Industrial Classificatio	n, and specific manufacturing process).
_ Manufacturer of Hom	me Chest Freezers and Vacuum	
Home and Commercia	l Ice Haking Equipment	· · · · · · · · · · · · · · · · · · ·
	· · · · · · · · · · · · · · · · · · ·	
		<u></u>
12. Standard industrial classification number.	13. Principal product.	14. Amount of principal product produced per day.
493, 3632		per day.
3635, 3585		·
		<u> </u>
15. Principal raw material.	16. Amount of principal raw material	17. Number of batch discharges per day.
Sheet Steel	consumed per day. 100 tons	None
18. Average gallons per batch discharge. 19). Date discharge began.	20. Date discharge will begin.
Not Applicable		Approx. Mar. 1 1972
noo appiroadio	mo day yr	$\frac{M}{m_0} \frac{a}{m_0} \frac{r}{day} = \frac{1972}{y_t}$
21. Describe waste abatement practices.		·
Conservation of a	poling waters by recirculati	ion and use
	. Separation of sanitary was	
and industrial pro	ocess waste water from clear	n process water
	filtration of water wash st	
Screening, filter	ing and settling tanks. ESE ECYCL. LOCALS, OMONIT, PSCF	EPAR, ESURFA,
<u> </u>	BOTOL: BOALD, OMONIT, THE	CES, TOEDIN.
ā		

ENG FORM 4345-1

22.	PHY	/S1C	ALI	DESCRIPTI	ON OF INTAK	E WATE	RA	ם מא	DISCHARGE				ż,
Intake	Intake Discharge (Office use only)												
WAY A CALL	My ARE	A 160 165		ALERACE DAIL	OSES WINING TO SEAL THE SEAL T	OREAR	To the state of	13, C.P.R.	FRE OURACL	Discharge Seri	·		
Parameter and (Code)	(1)			(2)	(3)	(4)		\	(5)	(6)		7)	
Flow (Gallons per day) 00056	1,170,	000	26	60,000	600,000	144,0	000	.]	1,200,000	OTHR	Rec	ord	ing
pH 00400	7.8			8.5	7.8	7	.0		8.5	OTHR	. A	BS	
Temperature (Winter) (°F) 74028	50			50	80	. 3:	2		120	OTHR	A	BS	
Temperature (Summer) (°F) 74027	60			80	100	6	0		140	OTHR	À	BS	
23.	·			Di	SCHARGE CO	NTENTS	S				-l		-
PARAMETER		PRESENT	ABSENT	P.	ARAMETER		PRESENT	ABSENT	Р	ARAMETER		PRESENT	ABSENT
Color 00080			X	Aluminum 01105		· . -		?	Nickel 01067		. · <u>.</u>		?
Turbidity 00070		Х		Antimony 01097				?	Selenium 01147		•		?
Radioactivity 74050			X	Arsenic 01002				?	Silver 01077				?
Hardness 00900		Х		Beryllium 01012				?	Potassium 00937			<u> </u>	?
Solids 00500		X		Barium 01007				?	Sodium 00929				?
Ammonia 00610		X	<u> </u>	Boron 01022		····	· .	?	Titanium 01152			_	?
Organic Nitrogen 00605			?	Cadmium 01027		·	<u> </u>	?	Tin 01102		··-·	_	?
Nitrate 00620		Х		Calcium 00916			<u> </u>	.3	Zinc 01092			X	<u> </u>
Nitrite 00615			х	Cobalt 01037			<u> </u>	?	Algicides 74051				X
Phosphorus 00665		Χ		Chromium 01034			х		Oil and Greas 00550	se			X
Sulfate 00945		?		Copper 01042				?	Phenols 32730				X
Sulfide 00745			?	Iron 01045			?		Surfactants 38260				Х
Sulfite 00740			?	Lead 01051				?	Chlorinated I 74052	Hydrocarbons			Х
Bromide 71870			?	Magnesium 00927			?		Pesticides 74053				x
Chloride 00940		х		Manganese 01055				?	Fecal Strepto 74054	cocci Bacteria			Х
Cyanide 00720			?	Mercury 71900		-		?	Coliform Bac 74056	teria			Х
Fluoride 0095₹		l	?	Molybdenu 01062	m		†	?				1	\vdash

24a.	Have all I	known hazardous or potentially hazardous substances in y	our pla	nt been in	ventoried?
	<u></u>	Yes No			
24Ь.	If yes, ha this disch		ity of a	ny such kn	own hazardous or potentially hazardous substance entering
	[2	Yes No			·
is us to In pu	tics. ed for the Pl take warposes	Column (1) Untreated Intake Water cooling purposes and most process halen Creek clean water sewer. It ater — this is water from Municipa and is discharged to the sanitary above completes the basic reporting requirements which	is wat come lawa	used for and s from ter syler.	d constitutes the water discharged the Jordan Strata. Column(2)Treated
well.					
		CRITICAL IND	USTR	IAL GRO	DUPS
sıc	098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC	285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC	10-14	DIVISION B - MINING	SIC	2871	FERTILIZERS
SIC	201	MEAT PRODUCTS	SIC	2879	AGRICULTURAL PESTICIDES, AND OTHER AGRI-
SIC	202	DAIRY PRODUCTS			CULTURAL CHEMICALS, NOT ELSEWHERE CLASSIFIED
SIC	203	CANNED PRESERVED FRUITS, VEGETABLES (EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC	2891	ADHESIVES AND GELATIN
SIC	2031,	CANNED AND CURED FISH AND SEA FOODS;	SIC	2892	EXPLOSIVES
	2036	. FRESH OR FROZEN PACKAGED FISH AND SEAFOCDS	SIC	29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC	204	GRAIN MILL PRODUCTS	SIC	3011, 3069	TIRES AND INNER TUBES; FABRICATED RUGBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC	206	SUGAR	SIC	3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC	207	CONFECTIONARY AND RELATED PRODUCTS	SIC	311	LEATHER TANNING AND FINISHING
SIC	208	BEVERAGES	-SIC	32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC	209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC	331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC	22	TEXTILE MILL PRODUCTS	SIC	332	IRON AND STEEL FOUNDRIES
SIC	23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC	333, 334	PRIMARY SMELTING AND REFINING OF NON- FERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC	242	SAWMILLS AND PLANING MILLS	SIC	336	NONFERROUS FOUNDRIES
SIC	2432	VENEER AND PLYWOOD	SIC	347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC	2491	WOOD PRESERVING	SIC	35	MACHINERY, EXCEPT ELECTRICAL
SIC	26	PAPER AND ALLIED PRODUCTS	SIC	36	ELECTRICAL MACHINERY, EQUIPMENT, AND
SIC	281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)		27	SUPPLIES
SIC	2818	INDUSTRIAL ORGANIC CHEMICALS	SIC	37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC	282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC	SIC	3731	SHIP BUILDING AND REPAIRING
		AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	SIC	491 /	ELECTRIC COMPANIES AND SYSTEMS
SIC	283	DRUGS	SIC	493	COMBINATION COMPANIES AND SYSTEMS
sıc	284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS			

Item 25. Remarks continued: Column (6) - OTHR refers to single grab sample.

- Part A Only data on well water is reported, as City water is not involved in this discharge. In column (9) OTHR refers to one grab sample, or upon analysis by NALCO for the Theodore Hamm Company. Column (8) this was probably a single grab sample, as water from Jordan Strata probably does not change in composition. Column (10) method of analysis are those used by Nalco, which are probably standard methods.
- Part B Table B-2 Column (8) Sample Type Single grab sample, this also applies to Column (9). Column (10) Method of analysis was that used by Nalco Chemical Co. Only data on well water is reported as City water is not involved in this discharge.

·00697 PART A (Office use only) (Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.) Discharge Serial No. 001 Intake

OAILY

AUG. CONCENTRATE NA PARTION (1) PARTION INFORMATION REQUIRED OF SPECIFIED INDUSTRIES OAIL TREATED INTAKENATER INTER Discharge Matinum Concentration (3) Maximum process of the party of CONCENTRALG. Mating Na OUNOS SAMOLE FREQUENCY ALERAGE POUNOS Ox Mr. 1400 200 VINUOUS NONITORING SANDLE TAPE (5) (8) (10) (11) 00410 256 256 25.6 2560 256 1280 OTHR ABS B.O.D. 5-DAY 00310 OTHR 0 0 ABS CHEMICAL OXYGEN DEMAND (C.O.D.) EAS-0 OTHR 0 SEE. AE: 00340 MALL **TOTAL SOLIDS** Ŕ 00500 290 290 OTHR 29.0 28.96 290 ABS 1448 25 25 TOTAL DISSOLVED REMARKS REMARKS SOLIDS 290 290 29.0 28.96 290 1448 OTHR SEA 70300 TOTAL SUSPENDED 유 읶 SOLIDS OTHR ABS 0 0 SEC 00530 TOTAL VOLATILE NOI. NOI SOLIDS 160 160 1600 160 008 OTHR ABS 16 00505 AMMONIA (as N) 00610 .08 0.1 0.1 9.9 5.7 OTHR 0.1 SãA KJELDAHL NITROGEN 00625 0.6 0.6 .60 60 0.6 30.0 OTHR £ES. NITRATE (as N) 00620 0.1 0.1 .08 9.9 0.1 OTHR ABS 5.7 PHOSPHORUS TOTAL (as P)

40

0.4

0.4

0.4

20

00665

.02

ABS

OTHR

· .	TAB Guide for Com	LE A opletion of Part A			٠
PARAMETER & UNITS	METHOD	STANDARD METHODS 13TH ED. 1971	A.S.T.M. STANDARDS Pt. 23 1970	W.Q.O. METHODS 1971	SIGNIFICANCE IN REPORTING DATA
ALKALINITY AS Ca CO ₃ Mg/liter	ELECTROMETRIC TITRATION TECHNICON METHYL ORANGE METHOD	р. 370	p. 154	р. 6	x.
B.O.D. 5-DAY Mg/liter	MODIFIED WINKLER METHOD OR PROBE METHOD	p. 489	p. 712	p. 15	x.
CHEMICAL OXYGEN DEMAND (C.O.D.) Mg/liter	DICHROMATE REFLUX METHOD	p. 495	_	p. 17	x.
TOTAL SOLIDS Mg/liter	GRAVIMETRIC, 105°C. METHOD	p. 535	-	p. 280	х.
TOTAL DISSOLVED (FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 180°C.	p. 539	-	p. 275	x.
TOTAL SUSPENDED (NON-FILTERABLE) SOLIDS	GLASS FIBER FILTRATION METHOD, 103–105°C.	p. 537	-	р. 278	х.
TOTAL VOLATILE SOLIDS Mg/liter	GRAVIMETRIC METHOD 550°C.	p. 536	-	p. 282	x.
AMMONIA (as N) Mg/liter	DISTILLATION-NESSLERIZATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 453	-	p. 134	.xx
KJELDAHL NITROGEN Mg/liter	DIGESTION-DISTILLATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	р. 469	-	р. 149	.xx
NITRATE (as N) Mg/liter	BRUCINE SULFATE METHOD OR TECHNICON-HYDRAZINE REDUCTION METHOD	p. 461	-	p. 170	.xx
TOTAL PHOSPHORUS (as P) Mg/liter	PERSULFATE DIGESTION & SINGLE REAGENT METHOD OR TECHNICON-MANUAL DIGESTION & SINGLE REAGENT OR STANNOUS CHLORIDE	p. 526	_	р. 235	xx



REPORT OF

EFFLUENT ANALYSIS

From

THEODORE HAMM COMPANY ST. PAUL, MINNESOTA

Sample Morbed

PLANT INFLUENT

WELL WATER

Analysis No. 415607 Sampling Date Date Sample Rec'd. 11/9/71

•				
	:	Parts per million		Parts per millio:
	PH (PH UNITS)	7.9	TOTAL SUSPENDED SCLIDS	*ND(1.)
	AMMONIA AS N	0.1	CHEMICAL OXY. DEMAND (02)	*ND(2.)
	KJELDAHL NITROGEN AS N	0.6	TOTAL SOLIDS	290.
	NITRATE AS N	0.1	TOTAL VOLATILE SOLIDS	160.
· •	TOTAL DISS. SOLIDS (GRA	V) 290.	TOTAL ALK. (CACO3)	256.
	CHLORIDE AS CL -	39.	PHOSPHORUS-CRTHO (AS P)	0.02
	PHOSPHORUS TOTAL (AS P)	0.02	ZINC AS ZN (PPB)	20.
ı	TOTAL CHROMIUM AS CR (2	PB) 10.	SULFITE AS SO3	*ND (1.)
	PHENOLS AS PHENOL (PPB)	1.		

NOT DETECTED BELOW INDICATED CONCENTRATION

James Jothichay

	PA	RTB DISC	HARGE	DESCRIPTION	J		
(Not Set seems of Part B also trouved to submit Pert A, indicated to the instructions are	Only those paramet	ers specifically		(Office use only)			
	,		.,,		· Di	ischarge Serial No.	
B-1. PHYSICAL	AND BIOLOGICA	AL PARAMET	ERS OF II	TAKE WATER	AND DISCHAR	GE (Saa Table I	3-1)
Intake				Discharge			
a Ch	4,	(0)		SA,	CONTIN	yı.	
WATAREATED ATER	INTAFATED AL	EAACE IDAILY,	ERATING YES	COPERATING TEARS	CONTINUE FREQUENCY	NUOUS MONITORING	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)
COLOR 00080							
SPECIFIC CONDUCTANCE 00095							
TURRIDITY 00070	W						
FECAL STREPTOCOCCI BACTERIA 74054							
FECAL COLIFORM BACTERIA 74055							
TOTAL COLIFORM BACTERIA 74056							
						,	
	. 		<u> </u>		1	. 1	
							·

-			P	ART B							
			<u> </u>		Office use only	₍)		., -			
				L			Discha O(rge Seria	il No.		
B-2.	CHEMICAL	PARAMET	ERS OF IN	TAKE W	ATER AND	DISCHARGE					
Intake					Discharge	· · · · · ·					
PARAMETER TAEA	reo wratena,	MA + AN CONCENTRATE	AND AND SALAND AND CESS UNIT	OAIL OUNOS PE	ALEA TO CONCENTA	AGE POUNOS PER	SAMPIE FAEOU	NTINUOU SANAL	SMONI	OAING	``.
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	()
ACIDITY (as CaCO ₃) 00435											
TOTAL ORGANIC CARBON (T.O.C.) 00680						·					
TOTAL HARDNESS 00900	W										
NITRITE (as N) 00615											
ORGANIC NITROGEN 00605											
PHOSPHORUS-ORTHO (as P) 70507	W										
SULFATE 00945	W										
SULFIDE 00745			·								
SULFITE 00740											
BROMIDE 71870		·									

				PART B		•	ı				
				(0	ffice use only)					
				L			Discher 0	ge Seria	il No.		-
B-2. (cont.)	CHEMICA	L PARAME	TERS OF I	NTAKE W	ATER AND	DISCHAR	GE (See Ta	ble B-	2)		-
Intake					Discharge						<u>-</u>
UNTREAT TREAT	Ma+IM	Na+IA	The Maximo	CAILY	Y ALERA		SAME THE	74			
CATALATED INTAKE	MATINU MATINU	Ma+R. SER CONCENTRATE	MA TIMO PROCESSIONIF	OAIL TA	ALERA LC. CONCENTRA	ST POUNOS PER	SAMPLE THEOLOGY	TINUOU OF ANAL	SMONI	TO AL	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[1.
CHLORIDE 00940	39	-	39.5	3.9	395	39.5	198	A	0	0	A
CYANIDE 00720			·							-	
FLUORIDE 00951		·									
ALUMINUM-TOTAL 01105							·				
ANTIMONY-TOTAL 01097											
ARSENIC-TOTAL 01002											
BARIUM-TOTAL 01007											
BERYLLIUM-TOTAL 01012				·							
BORON-TOTAL 01022											
CADMIUM-TOTAL 01027											

			P	ART B							
				10	ffice use only)						
				<u>L</u>	·		Discharg	e Seria	l No.	 .	
B-2. (cont.)	CHEMICAL	PARAME	TERS OF I	NTAKE W	ATER AND	DISCHARGE	(Sea Tal	e B-2	2)		
Intake			· - · · · · · · · · · · · · · · · · · ·		Discharge .					-	
UNTAKATEO INTAKEN	TEO INTAKE MATE	CONCENTRAT	AND AND ONIOS ALFORDS	OAILY A THEOLOGY OF PER	AVERA CONCENTRA	St. POUNDS PER DA	AL PHOOF PROOF	FIRIOUS ANAL	S NO. NI.	TORING	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
CALCIUM-TOTAL 00916										-	
CHROMIUM-TOTAL 01034	W	·									•
COBALT-TOTAL 01037											
COPPER-TOTAL 01042											
IRON-TOTAL 01045	W					·			,		
LEAD-TOTAL 01051											
MAGNESIUM-TOTAL 00927	W		·								
MANGANESE-TOTAL 01055				·	·						
MERCURY-TOTAL 71000					·						
MOLYBOENUM-TOTAL 01632	·										

			F	PART B							
				(0	ffice use only)					
· .				L			Discher:	_	l Na.		
B-2. (cont.)	CHEMICA	L PARAME	TERS OF	INTAKE W	ATER AND	DISCHARGE	(See Tai	ble B-	2)		
Intake		·			Discharge		, , , , , , , , , , , , , , , , , , , 				
CATREATED INTAKE	Maximus ARENASTER	Ma+IN CONCENTRATE	NON PROUNDS PER LINE	OAILY A	AVERA CONCENTRA	GE POLINGS PER OF	METHOD CON	TINUOU. ANAL	SMONI	OAING	
AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(1)
NICKEL-TOTAL 01067											<u> </u>
POTASSIUM-TOTAL 00937											
SELENIUM-TOTAL 01147											-
SILVER-TOTAL 01077							<u>.</u>			,	
SODIUM-TOTAL 00929							· · · · · · · · · · · · · · · · · · ·				
THALLIUM-TOTAL 01059											
TIN-TOTAL 01102	W		·								
TITANIUM-TOTAL 01152							·				
ZINC-TOTAL 01092											
OIL AND GREASE 00550					·						

			F	PART B		•					
	 			10	Office use only	')			<u> </u>		
							Dischar	ge Seria	l No.	.,	
B-2. (cont.)	CHEMICA	L PARAME	TERS OF I	NTAKE W	ATER AND	DISCHARGE)		
Intake	·				Discharge	· 	_ `				
CATAL TREATED INTAKENA PARAMETER	Ma+IMO INTAKE NA	MA+IN CONCENTRAT	NA TIME PROCESS UNIT	OAILY OUNOS PER	ALER CONCENTR	ACE POUNOS PER LATION	AND THOO SE TYPE OUT	TINUOU ANAI	SMONI	TORING	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	Т
PHENOLS 32730	W			·							
SURFACTANTS 38260											
ALGICIDES* 74051											
CHLORINATED HYDRO- CARBONS* (EXCEPT PESTICIDES) 74052											+
PESTICIDES* 74053											
											1
											+
											1
		1	l	I	ŀ			1	l	1	ı

			PART B				
·		,		(Office use only)			
						Discharge Serial	No.
B-3. RADIO	ACTIVE PARAM	ETERS OF IN	TAKE W	ATER AND DISC	HARGE (S	se Table B-3)	
Intake				Discharge			
INTATALE ATED	Wrake Areo	RACE IDAILY,	RAININUM SEA	COPE MA TIMULA SAME	CON CONTRACTOR PROPERTY.	NTINUOUS MONITORI	No
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ALPHA-TOTAL 01501							
ALPHA COUNTING ERROR 01502							
BETA-TOTAL 03501							
BETA COUNTING ERROR 03502					,		
GAMMA-TOTAL 05501							
GAMMA COUNTING ERROR 05502							
TRITIUM-TOTAL 07000							
TRITIUM COUNTING ERROR 07001							
	- '						
			•				
34. REMARKS							
4,							·

			
SECTION II.	PLANT PROCES	SS AND DISCHARGE	DESCRIPTION
1. Discharge described bolow is		(Office us	e only)
a. Present b. Proposed new	2. Implementatio	n	e omy)
or changed X	schedule		
Name of corporate boundaries within which the po	vint of discharge is los		6. Discharge Serial No.
State	County		I
State	County		City or 001
, Minnesota	. Ra	msey	_{5.} St. Paul
3	4		5
State the precise location of the point of discharge		9. Name of waterway at	· -
7. Latitude Degrees; Mi	n; Sec.	City of St.	Paul, Phalen Creek
			•
8. Longitude Degrees; Mi	n; Sec.	Clear Water	Sewer
10. Has application for water quality certification	or description of impa	act been made? If so, give	edate: - not required
Date	Check if certi		Name Issuing Agency
Da 10	is attached to	F 1	italije issamg riganar
·			
mo day yr			
11. Narrative description of activity (include terms	of naneral Adiair Con	ndard Industrial Classifie	ation, and specific manufacturing process
			and Vacuum Cleaners,
Home and Com	mercial Ic	e Making Equi	ipment
		^_	
			
	· · · · · · · · · · · · · · · · · ·		
			
· · · · · · · · · · · · · · · · · · ·			
			
	· · · · · · · · · · · · · · · · · · ·		<u></u>
		_/	
12. Standard industrial classification number.	13. Principa'	´	
12. Standard industrial classification fidinger.	13. Frincipa		principal product produced
493		7	
•	- /		
		F	7
15. Principal raw material.	1.		7. Number of batch discharges per day.
· · · · · · · · · · · · · · · · · · ·	c		, , , tallings, or batter, also having as por day,
Sheet Steel			_ None
	-		
<u> </u>		_	/
			
18. Average gallons per batch discharge.	19. Date discharge b	egan.	20. Date discharge will begin.
<u> </u>			Approx.
Not Applicable	,		_ Mar11972_
	mo ·	day yr	
21. Describe waste abatement practices.	<u> </u>		
- 1 COUNTE TROOTS ANAICHIENT DISCUUL			·
• •		•	i
•	of coolin	d waters nv i	recirculation and use
Conservation			recirculation and use
<u>Conservation</u> of cooling t	owers. Se	paration of s	sanitary waste water
Conservation of cooling t and industri	cwers. Se al process	paration of s waste water	sanitary waste water from clean process water.
Conservation of cooling t and industri Sedimentation	cwers. Se al process on and filt	paration of s waste water ration of was	sanitary waste water from clean process water. ter wash spray booth water.
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA,
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water.
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA,
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA,
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA, DNIT, PSCREE, PSEDIM.
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA, DNIT, PSCREE, PSEDIM.
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA, DNIT, PSCREE, PSEDIM.
Conservation of cooling t and industri Sedimentation Screening, f	cowers. Se al process on and filt iltering a	paration of s waste water ration of wat nd settling t	sanitary waste water from clean process water. ter wash spray booth water. tanks. ESEPAR, ESURFA, DNIT, PSCREE, PSEDIM.

22.	PHY	/SIC.	AL [DESCRIPTION	ON OF INTAK	E WATE	RA	ND	DISCHARGE				
Intake				Discharge		(Of	fice u	ise o	nly)				
Parameter St. Parameter	POLY CACA ROLL	C. P. C. O. C. S.		ALERACE DAIL	Control of the state of the sta	ORENA DE	So + Inde	N. ENR	TREOLENCY.	Discharge Seri			
Parameter and (Code)	SC (1)	/		(2)	(3)	(4)	_	\	(5)	(6)	(7 \	'I '	
Flow (Gallons per day) 00056	1,170,0	000	26	0,000	750,000	180,0	000		1,500,000	OTHR	Reco	rdíı	ng
рН 00400	7.8	3	8.5		7.8	7.0	0		8.5	OTHR	Al	3S	
Temperature (Winter) (°F) 74028	(°F) 50			50	80	32	2		120	OTHR		ABS	
Temperature (Summer) (°F) 74027			80 .	100	6(0		140	OTHR	Aì	3 S		
23.		1 1		DI	SCHARGE CO	NTENTS	3	1	,				
PARAMETER	₹	PRESENT	ABSENT	P.	ARAMETER		PRESENT	ABSENT	. Р	ARAMETER		PRESENT	ABSENT
Color 00080	<u></u> i		Х	Aluminum 01105				?	Nickel 01067				?
Turbidity 00070		X		Antimony 01097				?	Selenium 01147				7
Radioactivity 74050			X	Arsenic 01002				?	Silver 01077	· · · · · · · · · · · · · · · · · · ·			?
Hardness 00900		Х		Beryllium 01012				?	Potassium 00937 Sodium				?
Solids 00500		Х		Barium 01007				?	00929	·			?
Ammonia 00610	<u> </u>	х		Boron 01022	··· · · · · · · · · · · · · · · · · ·		_	?	Titanium 01152 Tin			_	?
Organic Nitrogen 00605			?	Cadmium 01027	· · · · · · · · · · · · · · · · · · ·			?	01102 Zinc				?
Nitrate 00620		Х		Calcium 00916				?	01092	-,		х	
Nitrite 00615			х	Cobalt 01037				?	Algicides 74051			<u>. </u>	×
Phosphorus 00665		х		Chromium 01034		· · · · -	х		Oil and Great 00550				х
Sulfate 00945		?		Copper 01042				?	Phenols 32730				x
Sulfide 00745			?	fron 01045			?	_	Surfactants 38260	,			X_
Sulfite 00740	•		?	01051				?	74052	Hydrocarbons	· .		x
Bromide 71870			?	Magnesium 00927			?		Pesticides 74053				x
Chloride 00940		x		പ്രവ്യാnese 01055				?	74054	ococci Bacteria			x
Cyanide 00720			?	Mercury 71900				?	Coliform Bac 74056	teria			х
Fluoride 00951			?	Molybdenu 01062	m			?					

					· · · · · · · · · · · · · · · · · · ·
24a.	Have all I	known hazardous or potentially hazardous substances in	your pla	ant been in	nventoried?
	K	X Yes No			
24b.	If yes, ha this disch		lity of a	ny such ki	nown hazardous or potentially hazardous substance entering
	K	X Yes No			
ist use to Int pur	ics. d for the Ph ake wa poses	Column (1) Untreated Intake Water cooling purposed and most proces alen Creek clean water sewer. It ter - this is water from Municiap and is discharged to the sanitary	is us to wat come land	ised forces, are ser systems.	
an ac well.	tivity inclu	ded within any of the Standard Industrial Classification	Code (S	IC Code)	categories listed below must complete Part A of this form as
	<u>-</u>	CRITICAL INC	USTR	HAL GR	OUPS
SIC	098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC	285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC	10-14	DIVISION B — MINING	SIC	2871	FERTILIZERS
SIC	201	MEAT PRODUCTS DAIRY PRODUCTS	SIC	2879	AGRICULTURAL PESTICIDES, AND OTHER AGRI- CULTURAL CHEMICALS, NOT ELSEWHERE
SIC	203	CANNED PRESERVED FRUITS, VEGETABLES			CLASSIFIED
		(EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC	2891	ADHESIVES AND GELATIN
SIC	2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND	SIC	2892	EXPLOSIVES
		SEAFOODS	SIC	29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC	204 206	GRAIN MILL PRODUCTS SUGAR	SIC	3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC	207	CONFECTIONARY AND RELATED PRODUCTS	SIC	3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC	207		SIC	311	LEATHER TANNING AND FINISHING
		BEVERAGES	SIC	32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC	209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC	331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC	22	TEXTILE MILL PRODUCTS	SIC	332	IRON AND STEEL FOUNDRIES
SIC	23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC	333, 334	PRIMARY SMELTING AND REFINING OF NON- FERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC	242	SAWMILLS AND PLANING MILLS	SIC	3 36	NONFERROUS FOUNDRIES
SIC	2432	VENEER AND PLYWOOD	SIC	347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC	2491	WOOD PRESERVING	SIC	3 5	MACHINERY, EXCEPT ELECTRICAL
SIC	26	PAPER AND ALLIED PRODUCTS	SIC	36	ELECTRICAL MACHINERY, EQUIPMENT, AND
SIC	281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)		,	SUPPLIES
SIC	2818	INDUSTRIAL ORGANIC CHEMICALS	SIC	37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC	282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC	SIC	3731	SHIP BUILDING AND REPAIRING
		AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	SIC	491	ELECTRIC COMPANIES AND SYSTEMS
SIC	283	DRUGS	SIC	493	COMBINATION COMPANIES AND SYSTEMS
SIC	284	SOAP, DETERGENTS, AND CLEANING PREP- ARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS			

Item 25. Remarks continued: Column (6) - OTHR refers to single grab sample.

Part A - Only data on well water is reported, as City water is not involved in this discharge. In Column (9) OTHR refers to one grab sample, or upon analysis by NALCO for the Theodore Hamm Company. Column (8) This was probably a single grab sample, as water from Jordan Strata probably does not change in composition. Column (10) method of analysis are those used by Nalco, which are probably standard methods.

Column (9). Column (10) - Method of analysis was that used by Nalco Chemical Co. Only data on well water is reported as City water is not involved in this discharge.

PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

See Item 25 Remarks of Section II for explanation of intake water in Column (1)

(Office use only)

Discharge Serial No. 001

INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

Intake	Discharge														
OAILY UNTREATED CONCEN	Intake Discharge Dis														
PARAMETER AND CODE	AATION/(1) A	47ER 1V(2)	7770	N (3)	O _Q (4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			
ALKALINITY (as Ca	256			256	i	3200 #3	256	1600	J. 6	OTHR	Sec	ABS			
B.O.D. 5-DAY 00310	0						0		e Z	OTRH	T+o	ABS			
CHEMICAL OXYGE DEMAND (C.O.D.) 00340	N 9				~	-	O	-	3 8	OTHR	m 25	ABS			
TOTAL SOLIDS 00500	290			290	36,2	3(20	290	1810	2 4 S	OTHR	Ro	ABS			
TOTAL DISSOLVED SOLIDS 70300	290			290	362	3620	290	1810	malko	OTHR	marko	ABS			
TOTAL SUSPENDE SOLIDS 00530	0	-)	_	0		0 +	OTHR	50	ABS			
TOTAL VOLATILE SOLIDS 00505	160			160	20	2000	160	1000	500	OTHR	Sockie	ABS			
AMMONIA (as N) 00610	0.1			0.1	0.1	12,4	0.1	6,2	tion 4	OTHR	" A -	ABS			
KJELDAHL NITRO 00625	0.6			0.6	0.75	75	0.6	37.5	7	OTHR		ABS			
NITRATE (as N) 00620	0.1			0.1	0.1:	12.4	0.1	6.2		OTHR		ABS			
PHOSPHORUS TOT (as P) poggs	0.02		1	0,4	0,5	50	0.4	25	4	OTHR	1	AB:			

TABLE A	
Guide for Completion of Part	Α

	·		REFERENCES	•	
PARAMETER & UNITS	метнор	STANDARD METHODS 13TH ED. 1971	A.S.T.M. STANDARDS Pt. 23 1970	W.O.O. METHODS 1971	SIGNIFICANCE IN REPORTING DATA
ALKALINITY AS Ca CO ₃ Mg/liter	ELECTROMETRIC TITRATION TECHNICON METHYL ORANGE METHOD	р. 370	p. 154	p. 6	х.
B.O.D. 5-DAY Mg/liter	MODIFIED WINKLER METHOD OR PROBE METHOD	ρ. 489	p. 712	p. 15	x.
CHEMICAL OXYGEN DEMAND (C.O.D.) Mg/liter	DICHROMATE REFLUX METHOD	p. 495	_	p. 17	х.
TOTAL SOLIDS	GRAVIMETRIC, 105°C. METHOD	p. 535	-	р. 280	X.
TOTAL DISSOLVED (FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 180°C.	p. 539	-	p. 275	х.
TOTAL SUSPENDED (NON-FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 103–105°C.	р. 537	-	р. 278	x.
TOTAL VOLATILE SOLIDS Mg/liter	GRAVIMETRIC METHOD 550°C.	р. 536	-	p. 282	x.
AMMONIA (as N) Mg/liter	DISTILLATION-NESSLERIZATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 453	_	р. 134	.xx
KJELDAHL NITROGEN Mg/liter	DIGESTION-DISTILLATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 469	. –	p. 149	.xx
NITRATE (as N) Mg/liter	BRUCINE SULFATE METHOD OR TECHNICON-HYDRAZINE REDUCTION METHOD	р. 461	-	p. 170	.xx
TOTAL PHOSPHORUS (as P) Mg/liter	PERSULFATE DIGESTION & SINGLE REAGENT METHOD OR TECHNICON-MANUAL DIGESTION & SINGLE REAGENT OR STANNOUS CHLORIDE	p. 526	_	p. 235	.xx



REPORT OF EFFLUENT ANALYSIS

From

THEODORE HAMM COMPANY ST. PAUL, MINNESOTA

Sample Merked

PLANT INFLUENT

WELL WATER

Analysis No.
Sampling Date
Date Sample Rec'd.

415607

11/ 9/71

Pa	rts per million		Parts per million
PH (PH UNITS)	7.9	TOTAL SUSPENDED SCLIDS	*ND(1.)
N ZA AINOMHA	0.1	CHEMICAL OXY. DEMAND (02)	*ND(2.)
KJELDAHL NITROGEN AS N	0.6	TOTAL SOLIDS	290.
NITRATE AS N	0.1	TOTAL VOLATILE SOLIOS	160.
TOTAL DISS. SOLIDS (GRAV)	290.	TOTAL ALK. (CACO3)	256.
CHLORIDE AS CL -	39.	PHOSPHORUS-CRTHO (AS P)	0.02
PHOSPHORUS TOTAL (AS P)	0.02	ZINC AS ZN (PPB)	20.
TOTAL CHROMIUM AS CR (PPB)	10.	SULFITE AS SO3	*ND (1.)
PHENOLS AS PHENOL (PPB)	1.		• •

*NOT DETECTED BELOW INDICATED CONCENTRATION

James Jothichay

	PA	ARTB DISC	HARGE DE	SCRIPTION			
(Note: Submission of Part la also required to submit Part A. Indicated in the instructions are	Only those pareme	ters specifically		ffice use only)			
						scharge Serial No	·.
B-1. PHYSICAL	AND BIOLOGIC	AL PARAMET	ERS OF INTA	KE WATER A			B-1)
Intake '				Discharge			
WATREATED ATER	WTAKENTED AL	SERACE TOAILY,	RATING YEAR,	EAATING VEARI	CONTINUE CONTINUE S	NUOUS MONITORIA	6
PARAMETER					-		. \
AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)
COLOR 00080							
SPECIFIC CONDUCTANCE 00095					÷		
TURBIDITY 00070	W	·					
FECAL STREPTOCOCCI BACTERIA 74054							
FECAL COLIFORM BACTERIA 74055							
TOTAL COLIFORM BACTERIA 74056							
		·					
		·					
4;							

ENG FORM

				PART B			,				
				(Office use only)					
				<u> </u>			Dischar	rge Seri	al No.		
B-2.	CHEMICAL	PARAMET	ERS OF I	NTAKE WA	TER AND D	DISCHARGE	(See Tab	le B-2)			
Intake	· · · · · ·	······································			Discharge						
CANTREATED INTAKE	Maximum ATEO INTAXE NATE	A CONCENTRA!	AND PROUNDS PROCESS ON TON	OAILY OUNDS PE	ALERA OAL OAL	GE POUNOS PER D	METHOD ETYPE OU	NTINUOU ANAI	Is NOW, YSIS	TORING	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
ACIDITY (as CaCO ₃) 00435											
TOTAL ORGANIC CARBON (T.O.C.) 00680											
TOTAL HARDNESS 00900	W				-						
NITRITE (as N) 00615					_						
ORGANIC NITROGEN 00605											
PHOSPHORUS-ORTHO (as P) 70507	W				-						
SULFATE 00945	W										
SULFIDE 00745				,			-,,				
SULFITE 00740											
BROMIDE 71970											

				PART B					716		
	·				Office use only)					
				L			Dischar	go Sari			
B-2. (cont.)	CHEMICA	L PARAMI	ETERS OF	INTAKE W.	ATER AND	DISCHAR					
Intake		- 4/			Discharge V						
CATREATEO INTAKE	ATED INTAKE NA.	NAXIA CONCENTRA	REALING POLICES UNIT	POAL POAL	ALERA OAL OAL OAL	GF POUNDS PER	Campile FARCUL	WINDOW AND LACK	I'S MON	TORING	6
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
CHLORIDE 00940	39		39,5	4.9	494	39.5	247	A	0	0	A
CYANIDE 00720											
FLUORIDE 00951											
ALUMINUM-TOTAL 01105											
ANTIMONY-TOTAL 01097											
ARSENIC-TOTAL 01002											
BARIUM-TOTAL 01007											
BERYLLIUM-TOTAL 01012											+
BORON-TOTAL 01022											· · · · · · · · · · · · · · · · · · ·
CADMIUM-TOTAL 01027											:

			í	PART B							
					Office use only)					
			•	,				rgo Seri			
B-2. (cont.)	CHEMICA	L PARAME	TERS OF	INTAKE V	WATER AND	DISCHAR	E (See T	able B	-2)		
Intake					Discharge						
CNTREATED INTAKEN	MaxIMC ROMPAKENA,	MA TIME CONCENTRAL	MaxIMO PROCESS UNIT	OAIL,	ALERA ALERA	GE POUNOS PER	AMOLE SALO	NriNUO OF ANA	isnon	TORIN	Co
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
CALCIUM-TOTAL 00916						·			-		
CHROMIUM-TOTAL 01034	W						-				
COBALT-TOTAL 01037								-			
COPPER-TOTAL 01042											
IRON-TOTAL 01045	W										
LEAD-TOTAL 01051											
MAGNESIUM-TOTAL 00927	W						·				
MANGANESE-TOTAL 01055										,	
MERCURY-TOTAL 71900											-
MOLYBDENUM-TOTAL 01052											

,					·			. 007	'ro		
			1	PART B							
	·		, '	((Office use only	·)					
		·						033 Sal	kal No.		
B-2. (cont.)	CHEMICA	L PARAME	TERS OF	INTAKE W	ATER AND	DISCHAR	GE (Soe T	able B	-2)		
· Intake					Discharge						
CATREATEO INTAKE IN	Maximu Maximu Arena	Matin Concentral	MA+ING PROCESS UNIT	OAILY POUNOS PER	ALERA OAL OAL OAL	ACE POUNOS PER	SAMPIE FAEOU	Nringo of availance	15201	ITO AIN	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7).	(8)	(9)	(10)	
NICKEL TOTAL 01067											
POTASSIUM-TOTAL 00937											
SELENIUM-TOTAL 01147				·							
SILVER-TOTAL 01077											
SODIUM-TOTAL 00929			·								
THALLIUM TOTAL 01059											
TIN-TOTAL 01102											,
TITANIUM-TOTAL 01152			·								
ZINC-TOTAL 01092	W										
OIL AND GREASE 00550											

B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2) Intake Discharge ARAMATRIAN CONTRACTOR AND		•			PART B	i						
B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2) Intake Discharge LANARATEO ANARATEO AN		·			((Office use only)					
B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2) Intake Discharge LAND AREA TO ANALY AND		•						····				
Intake					•					l No.		
CANTARE A FEO INTARA HALAN CONCENTRATION AND ALERANDA AND CONCENTRATION AND ALERANDA AND CONCENTRATION AND ALERANDA AND CONCENTRATION AND ALERANDA AND CONCENTRATION AS THE PARTICULAR AND CONCENTRATION AND THE PARTICULAR AND	B-2. (cont.)	CHEMICA	L PARAME	TERS OF I	NTAKE W	ATER AND	DISCHARG	E (See Tabl	le B-2)		
AND CODE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) PHENOLS 32730 SURFACTANTS 38260 ALGICIDES* 74051 CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES)	· '		······································			Discharge			<u> </u>			
AND CODE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) PHENOLS 32730 SURFACTANTS 38260 ALGICIDES* 74051 CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES)	CATA TRE	Not.	No.tu	Hatu.	OAILL	ALER.		THE CON	/			
AND CODE (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) PHENOLS 32730 SURFACTANTS 38260 ALGICIDES* 74051 CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES)	EATEO INTAKE	TEO INTAKE INA	IN CONCENTRAL	NUM POUNDS PER JOH	IN POUNOS PER	ALC. CONCENTR.	GE POLINDS PER	Moder AROUR	NUOU ANAL	SNONI	TORING	
SURFACTANTS 38260 ALGICIDES* 74051 CHLORINATED HYDRO- CARBONS* (EXCEPT PESTICIDES)	LAUVINELEIL	i			l .	1			1	<u> </u>		(11)
ALGICIDES* 74051 CHLORINATED HYDRO- CARBONS* (EXCEPT PESTICIDES)		W					-					
CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES)												
CARBONS* (EXCEPT PESTICIDES)												
	CARBONS* (EXCEPT PESTICIDES)	-										
PESTICIDES* 74053												
	·		·					·				
					,							

as necessary.

				 			720
	•		PART B				
			·	(Office use only)			
· · · · · · · · · · · · · · · · · · ·						Discharge Seriel	No.
B-3. RADIO	ACTIVE PARAM	METERS OF II	NTAKE W	ATER AND DISC	CHARGE (Se	e Table B-3)	
Intake				Discharge			
WWAREATED AFER	INTAKE ATED	GERACE IDAILY,	RATING SEA	CORE MATINIONA RIVERARI	CON CONTRACTOR CONTRAC	TINUOUS MONITOR,	no
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ALPHA-TOTAL 01501							
ALPHA COUNTING ERROR 01502							
BETA-TOTAL 03501					*		
BETA COUNTING ERROR 03502							
GAMMA-TOTAL 05501		·					
GAMMA COUNTING ERROR 05502							
TRITIUM-TOTAL 07000							
TRITIUM COUNTING ERROR 07001							
							•
3-4. REMARKS		<u>. </u>			1		<u> </u>

SECTION II. PLANT PROCESS AND DISCHARGE DESCRIPTION	
1. Discharge described below is a. Present b. Proposed new or changed X 2. Implementation schedule (Office use only)	
Name of corporate boundaries within which the point of discharge is located. State County City or Town	
3. Minnesota 4. Ramsey 5. St. Paul	
State the precise location of the point of discharge. 9. Name of waterway at the point of discharge.	
7. Latitude Degrees:Min: Sec. City of St. Paul, Phalen Creek 8. Longitude Degrees: Min: Sec. Clear Water Sewer	
10. Has application for water quality certification or description of impact been made? If so, give date: not required Date Check if certificate Name Issuing Agency is attached to form	
mo day yr	
11. Narrative description of activity (include terms of general 4-digit Standard Industrial Classification, and specific manufacturing process). Manufacturer of Home Chest Freezers and Vacuum Cleaners,	
Home and Commercial Ice Making Equipment	
	
12. Standard industrial classification number. 13. Princi	xduced
493,3632	
3635,3585	
15. Principal raw material.	day.
Sheet Steel None	
None	
18. Average gailons per batch discharge. 19. Date discharge will begin. Approx.	
	7 _{yr}
21. Describe waste abatement practices.	
Conservation of cooling waters by recirculation and use	
of cooling towers. Separation of sanitary waste water and industrial process waste water from clean process water.	
Sedimentation and filtration of water wash spray booth water.	
Screening, filtering and settling tanks. ESEPAR, ESURFA,	
DHYSIC, RECOVE, RECYCL. LOCALS, OMONIT, FSCREE, PSEDIM.	· ·
	 :
	

ENG FORM 4345-1

22.	PHY	/SIC/	AL [ESCRIPTIO	ON OF INTAK	E WATE	R A	NDI	DISCHARGE				
Intake				Discharge		(01	ffice u	se on	ily)	:			
NANTA RATE	Wrake.	N. P. C.S		ALERAGE DAILY	COSER STRUMENT ENF	ORENE	20+11/2		ENE OLINGS	Discharge Serio	••••	·	
Parameter and (Code)	(1)	PAER	}	(2) P/L,	(3) (8A)	(4)	\ <u>\</u>	S. ENR.	(5)	NON TIN	ious 17	"	
Flow (Gallons per day) 00056	1,170,	000	2	60,0∞	150,000	36,0	000		300,000	OTHR	Reco	rdi	ng
pH 00400	7.8			8.5	7.8	7.0)		8.5	othr	A	BS	`
Temperature (Winter) (°F) 74028	50			50	80	32	<u> </u>		120	OTHR	A	ВS	
Temperature (Summer) (°F) 74027	60			80	100	60			140	OTHR	A	BS	
23.			1	DI	SCHARGE CO	NTENT	S						
PARAMETER		PRESENT	ABSENT	P <i>)</i>	ARAMETER		PRESENT	ABSENT	Р	ARAMETER	·	PRESENT	ABSENT
Color 00080			χ	Aluminum .01105		•		?	Nickel 01067	*			?
Turbidity 00070 Radioactivity		Х	X	Antimony 01097 Arsenic 01002	-			?	Selenium 01147 Silver 01077				?
74050 Hardness 00900		Χ		Beryllium 01012			 	?	Potassium 00937		-		?
Solids 00500		Х		Barium 01007				?	Sodium 00929				?
Ammonia 00610		Х		Boron .01022	·			?	Titanium 01152	<u></u>			?
Organic Nitrogen 00605			?	Cadmium 01027				?	Tin 01102	· · · · · · · · · · · · · · · · · · ·			?
Nitrate 00620		Х		Calcium 00916				?	Zinc 01092			Х	
Nitrite 00615			Х	Cobalt 01037				?	Algicides 74051				χ
Phosphorus 00665		Х		Chromium 01034			Х		Oil and Greas 00550	e			Х
Sulfate 00945		?		Copper 01042				?	Phenols 32730				X
Sulfide 00745			?	Iron 01045			?		Surfactants 33260				X
Sulfite 00740			?	Lead 01051				?	Chlorinated F 74052	lydrocarbons			Х
Bromide 71870			?	Magnesium 00927			?		Pesticides 74053				χ
Chloride 00940		Х		Manganese 01055				?	Fecal Strepto 74054	cocci Bacteria			Х
Cyanide 00720			?	Mercury 71900				?	Coliform Bac 74056	teria			Х
Fluoride 00951			?	Molybdenui 01062	m			?					

24>	Have all	known hazardous or potentially hazardous substances in	voucht	ot been is	nventoried?
244.	nave air	-	your pia	,,, Dee,, ,,	Wenterland .
	L	X Yes No			
24ъ.	If yes, ha		lity of a	ny such k	nown hazardous or potentially hazardous substance entering
	٦				
	L		<u> </u>		
isti used the (nta ourr	cs. () I for o Phaler ke wat coses a	column (1) Untreated Intake Water cooling purposes and most process a Creek clean water sewer. It concer - this is water from Municipal and is discharged to the sanitary nabove completes the basic reporting requirements which	is us water nes from the water sewer	ed for and com the r sys	constitues the water discharged to e Jordan Strata. Column (2) Treated
well.				<u> </u>	
		CRITICAL IN	บบราห	IAL GR	0012
SIC	098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC	285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC	10–14	DIVISION B — MINING	SIC ·	2871	FERTILIZERS
SIC	201 202	DAIRY PRODUCTS	SIC	2879	AGRICULTURAL PESTICIDES, AND OTHER AGRI- CULTURAL CHEMICALS, NOT ELSEWHERE
SIC	203	CANNED PRESERVED FRUITS, VEGETABLES	616	0004	CLASSIFIED
		(EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC	2891	ADHESIVES AND GELATIN
SIC	2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND	SIC	2892 29	EXPLOSIVES
SIC	204	SEAFOODS			PETROLEUM REFINING AND RELATED INDUSTRIES
	204 206	GRAIN MILL PRODUCTS	SIC .	3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC SIC	206	SUGAR CONFECTIONARY AND RELATED PRODUCTS	SIC	3079	MISCELLANEOUS PLASTICS PRODUCTS
			SIC	311	LEATHER TANNING AND FINISHING
SIC	208	BEVERAGES -	SIC	32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC	209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC	331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC	22	TEXTILE MILL PRODUCTS	SIC	332	IRON AND STEEL FOUNDRIES
SIC	23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC	333, 334	PRIMARY SMELTING AND REFINING OF NON- FERROUS METALS: SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC	242	SAWMILLS AND PLANING MILLS	SIC	336	NONFERROUS FOUNDRIES
SIC	2432	VENEER AND PLYWOOD	SIC	347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC	2491	WOOD PRESERVING	SIC	35	MACHINERY, EXCEPT ELECTRICAL
SIC	26	PAPER AND ALLIED PRODUCTS			
SIC	281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)	SIC	36	ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES
SIC	2818	INDUSTRIAL ORGANIC CHEMICALS	SIC	37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC	282	PLASTICS MATERIALS AND SYNTHETIC	SIC	3731	SHIP BUILDING AND REPAIRING
		RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	SIC	491	ELECTRIC COMPANIES AND SYSTEMS
SIC	283	DRUGS	SIC	493	COMBINATION COMPANIES AND SYSTEMS
SIC	284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS			

- Item 25. Remarks continued: Column (6) OTHR refers to single grab sample.
 - Part A Only data on well water is reported, as City water is not involved in this discharge. In column (9) OTHR refers to one grab sample, or upon analysis by NALCO for the Theodore Hamm Company. Column (8) this was probably a single grab sample, as water from Jordan Strata probably does not change in composition. Column (10) method of analysis are those used by Nalco, which are probably standard methods.
 - Part B Table B-2 Column (8) Sample Type Single grab sample, this also applies to Column (9). Column (10) Method of analysis was that used by Nalco Chemical Co. Only data on well water is reported as City water is not involved in this discharge.

PART A (Office use only) (Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.) See Item 25 remarks of Section II for explanation Discharge Serial No. of intake water in Column (1) 002 Intake OAILY INTREATED INTRAKE NA TENDAMENTAL TENDAME INFORMATION REQUIRED OF SPECIFIED INDUSTRIES Discharge Maximum Concentration (3) NA+IMINA POUNDS PER PROCESS UNIT OA L TREATED INTAKE WATER CONCENT A V.C. SAMPLE FREQUENCY Ma+INICAN POLINOS ALERACE POUNOS OF WELLOOD MONTINUOUS NONITORING SAMPLE TYPE (8) (11) (5) (6) (9) (10)OTHR ABS 640 256 320 256 6.4 B.O.D. 5-DAY 0 OTHR ABS 00310 0 CHEMICAL OXYGEN -SEE SEE. DEMAND (C.O.D.) OTHR ABS 0 0 00340 검 TOTAL SOLIDS 25 25 ABS 362 OTHR 00500 290 290 7.2 724 290. RE. MRKS MRKS TOTAL DISSOLVED SOLIDS ABS 362 OTHR 724 290 290 290 7.2 70300 呈 유 TOTAL SUSPENDED SECT: SECTION SOLIDS OTHR 0 ABS 0 00530 TOTAL VOLATILE SOLIDS 400 160 200 OTHR ABS 160 160 4 00505 AMMONIA (as N) 00610 OTHR 2.5 0.1 ABS 0.1 0.1 .02 .5 KJELDAHL NITROGEN 00625 15 0.6 OTHR SEA 0.6 0.6 .15 7.5 NITRATE (as N) 00620 OTHR ABS 0.1 0.1 .02 2.5 0.1 •5 PHOSPHORUS TOTAL (as P) OTHR ABS .Ol 10 0.4 .5 0.02 0.4 00665

	TABLE	Α		
Guide	for Complet	ion of	Part	Α

			REFERENCES		
PARAMETER & UNITS	METHOD	STANDARD METHODS 13TH ED. 1971	A.S.T.M. STANDARDS Pt. 23 1970	W.Q.O. METHODS 1971	SIGNIFICANCE IN REPORTING DATA
ALKALINITY AS Ca CO ₃ Mg/liter	ELECTROMETRIC TITRATION TECHNICON METHYL ORANGE METHOD	p. 370	p. 154	p. 6	x.
B.O.D. 5-DAY Mg/liter	MODIFIED WINKLER METHOD OR PROBE METHOD	p. 489	p. 712	p. 15	x
CHEMICAL OXYGEN DEMAND (C.O.D.) Mg/liter	DICHROMATE REFLUX METHOD	p. 495	-	p. 17	x.
TOTAL SOLIDS Mg/liter	GRAVIMETRIC, 105°C. METHOD	p. 535	_	p. 280	x.
TOTAL DISSOLVED (FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 180°C.	p. 539	-	p. 275	x.
TOTAL SUSPENDED (NON-FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 103-105°C.	p. 537	-	p. 278	x.
TOTAL VOLATILE SOLIDS Mg/liter	GRAVIMETRIC METHOD 550°C.	p. 536	-	p. 282	x.
AMMONIA (as N) · Mg/liter	DISTILLATION-NESSLERIZATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 453		р. 134	.xx
KJELDAHL NITROGEN Mg/liter	DIGESTION-DISTILLATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	р. 469	-	p. 149	.xx
NITRATE (as N) Mg/liter	BRUCINE SULFATE METHOD OR TECHNICON-HYDRAZINE REDUCTION METHOD	p. 461	_	p. 170	.xx
TOTAL PHOSPHORUS (as P) Mg/liter	PERSULFATE DIGESTION & SINGLE REAGENT METHOD OR TECHNICON-MANUAL DIGESTION & SINGLE REAGENT OR STANNOUS CHLORIDE	р. 526	-	p. 235	.xx



REPORT OF

EFFLUENT ANALYSIS

From

THEODORE HAMM COMPANY ST. PAUL, MINNESOTA

Sample Morked

PLANT INFLUENT WELL WATER

Analysis No. Sampling Date Date Sample Rec'd. 415607

11/ 9/71

	· ·			ATTACABLE DE SETE
-		Parts per million		Parts per milli
	PH (PH UNITS)	7.9	TOTAL SUSPENDED SCLIDS	<pre>#ND(1.)</pre>
_	AMHONIA AS N	0.1	CHEMICAL DXY. DEMAND (02)	*ND(2.)
(KJELDAHL NITROGEN AS N	0.6	TOTAL SOLIDS	290.
	NITRATE AS N	0.1	TOTAL YOLATILE SOLIDS	160.
•	TOTAL DISS. SOLIDS (GRA	V) 290.	TOTAL ALK. (CACO3)	256.
	CHLORIDE AS CL -	39•	PHOSPHORUS-CRTHO (AS P)	0.02
	PHOSPHORUS TOTAL (AS P)	0.02	ZINC AS ZN (PPB)	20.
	TOTAL CHROMIUM AS CR (F	PB) 10.	SULFITE AS SO3	*ND (1.)
	PHENOLS AS PHENOL (PPB)	1.		

*NOT DETECTED BELOW INDICATED CONCENTRATION

James Jothichy

Intake	ily those paramet be reported by a	era specifically particular indust	ERS OF IN	(Office use only) TAKE WATER A Discharge	ND DISCHAR		
B-1. PHYSICAL AN	ID BIOLOGICA	AL PARAMET	ERS OF IN	Discharge	ND DISCHAR	002 GE (See Table)	
Intake				Discharge		GE (See Table)	3-1)
Intake				Discharge			B-1) ·
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FECAL COLIFORM BACTERIA 74055	·					·	
TOTAL COLIFORM BACTERIA 74056							
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ENG FORM ASAG

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			F	PART B							
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	·			L			Dischar	ge Seria	il No.		
B-2.	CHEMICAL	PARAMET	ERS OF IN	TAKE WA	TER AND C	DISCHARGE	(See Tabl	B-2)			
Intake.		-			Discharge						
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TOTAL ORGANIC CARBON (T.O.C.) 00680				·					,	í	
TOTAL HARDNESS 00900	W	·									
NITRITE (as N) 00615						·					
ORGANIC NITROGEN 00605											
PHOSPHORUS-ORTHO (as P) 70507	W										
SULFATE 00945	W										
SULFIDE 00745											
SULFITE 00740											
BROMIDE 71870				·							

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B-2. (cont.)	CHEMICA	L PARAME	TERS OF I	HTAKE Y	OKA RETAK	DISCHAR			2)		_
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FLUORIDE 00951							,				
ALUMINUM-TOTAL 01105											
ANTIMONY-TOTAL 01097			·								
ARSENIC-TOTAL 01002											
BARIUM-TOTAL 01007			·				·				
BERYLLIUM-TOTAL 01012						·					
BORON-TOTAL 01022			·								
CADMIUM-TOTAL 01027											

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B-2. (cont.)	CHEMICAL	PARAME	TERS OF I	INTAKE 1	VATER AND	DISCHARG	E (S= Tel	ie B-	2)		
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CHROMIUM-TOTAL 01034	W										
COBALT-TOTAL 01037										-	
COPPER-TOTAL 01042											
IRON-TOTAL 01045	W			:							
LEAD-TOTAL 01051											
MAGNESIUM-TOTAL 00927	W										
MANGANESE-TOTAL 01055						·					
MERCURY-TOTAL 71600											
MOLYCDEMUM-TOTAL 01632			·								

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B-2. (cont.)	LHEMICA	L PAHAMI	EIEHS OF		VATER AND		UE (500 TI	nia R-	<u></u>		—
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NICKEL-TOTAL 01067											
POTASSIUM-TOTAL 00937											
SELENIUM-TOTAL 01147											
SILVER-TOTAL 01077											
SODIUM-TOTAL 00929											
THALLIUM-TOTAL 01059											
TIN-TOTAL 01102											
TITANIUM-TOTAL 01152									-		
ZINC-TOTAL 01092	W		·								
OIL AND GREASE 00550											

	 		F	PART B	***		·		, ,		
		·		(Office use only)					
				Ł.		- · · ·	Dischar	90 Seria	l No.		
B-2. (cont.)	CHEMICA	L PARAME	TERS OF I	NTAKE W	ATER AND	DISCHARGE	(See Tab	le B-2)		-
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PHENOLS 32730	W										
SURFACTANTS 38260	,										
ALGICIDES* 74051											
CHÉORINATED HYDRO- CARBONS* (EXCEPT PESTICIDES) 74952											
PESTICIDES* 74053											!
			·								

^{*}Name specific compound(s) and fill in the required data for each. Use extra blanks at the end of the form and the "Remarks" specias necessary.

			PART B				
				(Office use only)			
			. [·		
						Discharge Serial P 002	40.
3-3. RADIOAC	TIVE PARAM	ETERS OF IN	TAKE W	ATER AND DISC	HARGE (Sea	Table B-3)	
ntake				Discharge	· · · · · · · · · · · · · · · · · · ·		
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PARAMETER							
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ALPHA COUNTING ERROR 01502							· · · · · · · · · · · · · · · · · · ·
BETA-TOTAL 03501							
BETA COUNTING ERROR 03502							
GAMMA-TOTAL 05501							
GAMMA COUNTING ERROR 05502							
TRITIUM-TOTAL 07000							
TRITIUM COUNTING ERROR 07001							,
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B-4. REMARKS	<u> </u>	L		<u> </u>	<u> </u>	.l	
					•		

ENG FORM 4345-1

MINNESOTA POLLUTION CONTROL AGENCY

717 Delaware Street S.E./ Minneapolis, Minnesota 55440 Telephone: (612) 378–1320

March 3, 1972

Mr. E. W. Hartung, Facility Engineer Whirlpool Corporation 850 Arcade Street St. Paul, Minnesota 55106

Dear Mr. Hartung:

We have received the application for certification of discharge from the Whirlpool Corporation at St. Paul, which was submitted in accordance with the Federal Water Quality Improvement Act of 1970.

The agency staff is presently processing the application and shall remain in contact with the company on this matter.

If you have any questions, please let us know.

Yours very truly,

George R. Koonce, Acting Chief Section of Industrial & Other

Wastes

GRK/ECS:mf cc: Mr. Franklin Ryder, U. S. Corps of Engineers, St. Paul

PRINTED ON 100% RECYCLED PAPER

MINNESOTA POLLUTION CONTROL AGENCY

717 Delaware Street S.E./ Minneapolis, Minnesota 55440 .
Telephone: (612) 378–1320

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Per Millerine

Georgé R./Koonce, Acting Chief Section of Industrial & Other

Wastes

GRK/BCS:mf

cc: Mr. Franklin Ryder, U. S. Corps of Engineers, St. Paul

PRINTED ON 100% RECYCLED PAPER

148 K1 1001514

CERTIFIED MAIL - RETURN RECEIPT REQUESTED



DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT. CORPS OF ENGINEERS
1210 U. S. POST OFFICE & CUSTOM HOUSE
ST. PAUL, MINNESOTA 55101

IN REPLY REFER TO NCSCO-S

. 15 March 1972

Mr. E. W. Hartung
Facilities Engineer
Whirlpool Corporation
St. Paul Division
850 Arcade Street
St. Paul, Minnesota 55106

Dear Mr. Hartung:

Reference is made to the application for a permit pursuant to the Refuse Act which was submitted for your St. Paul facility. This application has been assigned the permanent serial No. Ø7Ø ØX8 001229.

There are certain deficiencies on the application which require attention before we can consider it administratively complete. They are as follows:

ENG Form 4345, item 2. Please supply us with the correct spelling of the signing official's name.

ENG Form 4345-1, item 10. To satisfy this item write a letter to the Minnesota Pollution Control Agency and specifically request a State certification that your discharge meets applicable State water quality standards and send us a copy of your letter.

ENG Form 4345-1, item 12. We have added your product SIC numbers which are 3632, 3635 and 3585 to our copy. Please alter your copy to agree.

On your drawing you have indicated two discharge points. We require a completed ENG Form 4345-1 and Part B for each discharge point. You will also have to revise your drawing by labeling your discharges 001 and 002 to correspond with the ENG Form 4345-1's. You are also required to submit an additional \$50 processing fee for the additional discharge.

NCSCO-S

15 March 1972

Mr. E. W. Hartung

We will expect these corrections by 14 April 1972.

Sincerely yours,

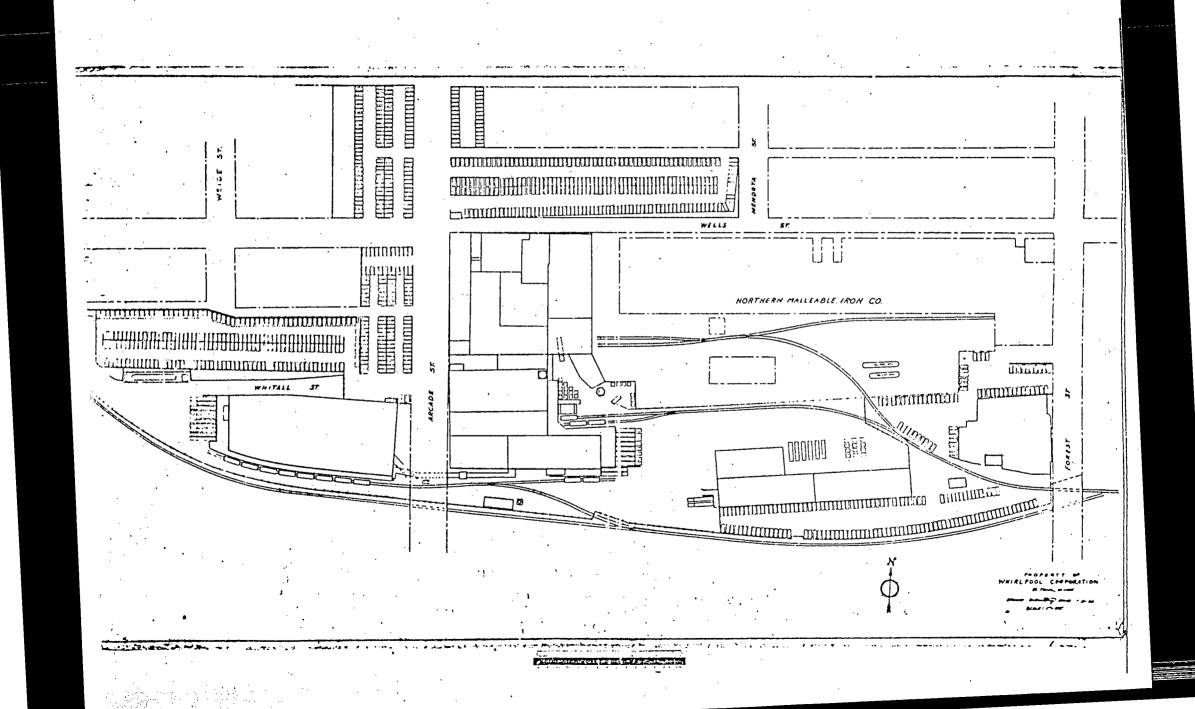
2 Incl (dupe)
1. Form 4345-1

2. Part B

WM. L. GOETZ

Chief, Construction-Operations

Division



1974 - 1978 # 250,000 COOLING TOWER # 80,000 co 800,000 WASTE WATER TREATMENT PLANT 50,000 RANSBURG Z 125,000 # PORCEIAN 10,000 PORCEGAIN DUST AIR DUST COLLECTORS 10,00000 5,0000 5,0000 NOISE. # 20,000 Conjuicos SOLID WASE

FIGURES T. GOODGAME IS USING FOR ST. PAUL DIVISION
FOR REPORT TO BOARD OF DIRECTORS
THE DOWAR AMOUNTS WILL NOT BE SHOWN
FIR EACH DIVISION JUST
3/28/72

1972-1977

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St. Paul Division

P. O. BOX 3380 • 850 ARCADE STREET ST. PAUL, MINNESOTA 55165

April 4, 1972

Department of the Army St. Paul District, Corps of Engineers 1210 U.S. Post Office & Custom House St. Paul, Minnesota 55101

Attention: Wm. L. Goetz

Subject: Your letter dated March 15, 1972, and your Code No. NCSCO-S

Gentlemen:

With reference to your letter of March 15, 1972, concerning additional information requested of Whirlpool Corporation, St. Paul Division.

- A. Eng. Form 4345, Item 2: Glenn Willis, is the correct spelling of the signing Group Vice President.
- B. Eng. Form 4345-1, Item 10: Copy of the letter to the Minnesota Pollution Control Agency is attached.
- C. Eng. Form 4345-1, Item 12: Our records have been changed to add the SIC Numbers.
- D. Eng. Form 4345-1:

We have revised this form and our drawing to show 2 separate discharges labeling them 001 and 002. A check number 026237 for the additional \$50.00 processing fee was sent to you on 3-28-72.

Yours truly,

E. W. Hartung

Facilities Engineer



St. Paul Division

P. O. BOX 3380 • 850 ARCADE STREET ST. PAUL, MINNESOTA 55165

April 5, 1972

Minnesota Pollution Control Agency 717 Delaware Street S.E. Minneapolis, Minnesota 55440

Attention: Geo. Koonce

Subject: Certification of Clear Water Discharge

Gentlemen:

We have been requested by the St. Paul District Corps of Engineers to specifically request State Certification of our Clear Cooling Water Discharge, as described in our letter to you dated February 23, 1972. I understand by your letter of March 3, 1972, that you considered this to be an application for certification and are acting upon it. If this is not correct, please advise me accordingly.

Yours truly,

E. W. Hartung

Facilities Engineer

cc: Wm. L. Goetz

Corps of Engineers St. Paul District Jy-



DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT. CORPS OF ENGINEERS
1210 U. S. POST OFFICE & CUSTOM HOUSE

ST. PAUL. MINNESOTA 55101

IN REPLY REFER TO

10 April 1972

ACKNOWLED CHENT OF RECEIPT OF APPLICATION FOR PERMIT

APPLICANT: Mr. E. W. Hartung

Whirlpool Corp.

St. Paul Division

850 Arcade Street

St. Paul, Minnesota 55106

FACILITY:

Your application for permit to discharge - effect work was

received in this office on: 3 March 3 March 1972

The application has been assigned a permanent serial number of:

Ø7Ø ØX8 001229

Please use this number whenever referring

to your application.

The application is in good order and we have begun processing.

WM. L. GOETZ

Chief, Construction-Operations

Division

NCS FL 694 29 April 1971

TOM FOR YOUR O SWAT 12

Jacob 3

April 11, 1972

To the Hon. Hayor and Members of the St. Paul City Council

Gentlemon and Madam:

Subject: Landfill Cover for

Pig's Eye Landfill

The July 1, 1972, date for the closing of the Pig's Eye landfill is fast approaching, and the City will be faced with the responsibility of closing out the landfill including providing the remaining two foot cover and seeding of the site in accordance with the standards of the Minnesota Pollution Control Agency for landfill disposal sites.

The Public Works Department has attempted over a period of time to provide a fee schedule at the landfill that would develop adequate funds for final cover in accordance with the state standards. However, to date such attempts have not been successful.

We have updated our estimated materials required between March 1, 1972, and the closing date of July 1, 1972, and approximately 180,000 cubic yards will be required for the remaining cover material in order to finish the site off in accordance with the Minnesota Pollution Control Agency's standards. If we continue to receive solid waste at the rate of 40¢ a cubic yard for diaposal and if we continue to pay the present price of approximately \$1.00 a cubic yard for the cover material, we will end up with a deficit of \$69,742. Public Works Department has no money available to finance the final closing of the Pig's Eye landfill; and we, therefore, request that the City Council provide the Public Works Department with sufficient funds to complete the closing in accordance with the State's standards, either by providing for adequate fees at the landfill or by providing moneys from another source.

of solid waste at the landfill, it will be necessary to increase the rate by 20¢ a cubic yard to a total of 60¢ a cubic yard in lieu of the 40¢ presently being charged based on present volume. It should be understood that with such an increase there is no doubt in my mind that there will be a reduction in quantity of solid waste received at the landfill which will,

Mayor & Council Page 2

In turn, reduce the amount of money available for such final cover. In the event the Council does determine that they will increase the fees to 60¢ a cubic yard, it may well be that the reduction in volume may result in a deficit in the amount of money available for the closing of the landfill.

We have taken the liberty of preparing a resolution for the Council which would increase the rate to 60¢ a cubic yard for solid waste at Pig's Eye landfill; and if it is the intent of the Council to raise the fees, we would suggest that a hearing be set for Tuesday, April 18, to consider the increase and to make such increase effective May 1, 1972.

It is necessary that the Council take some action with regard to the financing of the final cover for the Pig's Eye landfill; and we would, therefore, encourage the Council to take the steps necessary to see that such funds are available to the Public Works Department.

Very truly yours,

Richard A. Schnarr Chief Englneer

RAS: If

cc: Mayos all com.

Date 7/1/1/1/1999

Wastes Section - Sewer Design Division Department of Public Works Room 200, Lowry Hotel St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE AND FEEDWATER USAGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division for the period of Manual 1997 to Manual 27/47-15.

	Bldg. 21 Meter	Bldg. 17 Meter	
Reading Date	Reading - Gallons	Reading - Gallons	Total Discharge
am 27	357 114 mg	55 845 900	
Man to	210 627.000	11 4114 500	
			A Company of the Comp
Discharge	3/87/49 Gallons	© 94/14/ Gallons	? 328-/~ Gallons

Total Feedwater used at Whirlpool Corporation, St. Paul Division for the period of The April to Many.

/1070.000 Gallons

WHIRLPOOL CORPORATION



St. Paul Division

P. O. BOX 3380 • 850 ARCADE STREET
ST. PAUL, MINNESOTA 55165

May 2, 1972

Wastes Section - Sewer Design Division

Department of Public Works

Room 38 City Hall & Court House

RMZOO LOWRY HOTEL

St. Paul, Minnesota 55102

Attention: Dennis J. Grittner

Senior Wastes Technician

Re: Sewer Charge Adjustment on Clear Water Discharge from start up on March 16, 1972, to April 28, 1972

Dear Dennis,

Total volume discharged to the City of St. Paul Clear Water Sewer for the above period was 36,251,000 gallons. This is made up of 3,551,000 gallons from our building 17 metering installation and 32,700,000 gallons from the building 21 meter.

We are currently in the process of developing a form sheet to present this information to you monthly. The recording charts are also available if you wish to check on the daily flow rates.

Please contact me if you require any additional information.

. Yours truly,

CHARWATER PERS

E. W. Hartung Facilities Engineer

(ME)

\$6640-



St. Paul Division

P. O. BOX 3380 • 850 ARCADE STREET-ST. PAUL, MINNESOTA 55165

May 2, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

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Please contact me if you require any additional information.

Yours truly,

E. W. Hartung

Facilities Engineer



St. Paul Division

BILL TSCHIEDA

218-5421

P. O. BOX 3380 • 850 ARCADE STREET
ST. PAUL, MINNESOTA 55165

May 2, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

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Please contact me if you require any additional information.

Yours truly,

E. W. Hartung

Facilities Engineer

(ZEC')

\$6640-

May 18, 1972

Mr. Bonn Clayton Phoenix Industries, Inc. 6440 Flying Cloud Drive Eden Prairie, Minnesota 55343

Dear Mr. Clayton:

I have attached a listing of all rubbish haulers licensed to dump at Pig's Eye which you requested. I have also attached a tabulation showing all refuse that's been disposed of at Pig's Eye and Fish Hatchery since it became a self-sustaining operation in 1967. A landfill report that we prepared in 1970 is also attached. Much of the tabulated material and the comment is still current and may be of interest to you.

I trust that this information will be of some use to you.

Yours very truly,

DED

DOWALD E. NYGAARD
ASST. ENGINEER OF MAINTENANCE SERVICES

DEN/em Attachments (3)

P. S. - I don't feel that we have any really reliable information as to where the haulers shown on the list will go after July 1st. You may wish to contact some of these people.

DEN

May 23, 1972

Disposal Systems, Inc. 915 North Albert Street St. Paul, Minnesota 55104

Casanova Bros. Trucking 158 East Sidney St. Paul, Minnesota 55107

Waste Control, Inc. 637 Pine Street St. Paul, Minnesota 55101 Red Arrow Waste Disposal Serv. 41 East Chicago Avenue St. Paul, Minnesota 55107

Haul-A-Way Systems, Inc. 344 Larch Street St. Paul, Minnesota 55117

Gentlemen:

Sealed bids for the open and closed rubbish and cardboard containers removal will be received at Whirlpcol Corp., St. Paul Division through June 15, 1972. This contract will be for a 12 month period beginning July 1, 1972, and ending June 30, 1973.

The following equipment and requirements shall be the conditions of this contract:

- 1. Open containers shall be 30 yard capacity. If this size is not available within your operation, specify size that would be furnished.
- 2. Closed containers shall be 40 yard capacity containers compatible with E-Z Pack Model 3FPL1. Fixed packers (3 cu. yd.) are required. Charging opening in end gate, method of attachment to packer, etc.
- 3. 4 containers shall be required for proper service. 3 containers in use at all times and 1 spare for use when changing containers. A truck of sufficient capacity to handle 30 cubic yard containers is also required.
- 4. I container will be used for 55 gullon drums of porcelain sludge paint materials and will be picked up on the average of twice per month.

- 5. The company awarded this contract must assume all liability and responsibility for their employees and equipment while on whirlpool Corporation property.
- 6. All prime contractors or sub-contractors doing work in our plant on routine or normal small projects, in addition to mandatory workman's compensation insurance, must furnish "Certificates of Insurance" and have a minimum of \$300,000 per person and of \$500,000 per occurrence or accident of liability insurance, and a minimum of \$300,000 in property damage insurance.
- 7. A maximum time of 4 hours between a call for pickup of a container and pickup is required.
- 8. Pickup tickets with dates and unit picked up must be signed by a Whirlpool Corporation representative at the time of each pickup and the ticket must be left in the Salvage Department.
- 9. Invoices shall be submitted monthly, showing date and container picked up. Dumping charges to be separate from pickup charges.
- 10. Willful violation of any part of these conditions will void the contract at the discretion of Whirlpool Corporation, St. Paul Division.
- 11. Whirlpool Corporation, St. Paul Division, reserves the right to reject any and/or all bids.

Please include acceptance of contract conditions 1 through 11 as part of your written bid.

Yours truly,

Frank Vanyo With

Supervisor

Maintenance Department

Virgil L. Hillstrom

General Foreman

Maintenance Department

Jen gords July grape

June 27, 1972

TO: ALL CLERKS AND COMPLAINT DRIVERS

SUBJECT: DEAD ANIMAL AND RUBBISH DISPOSAL

With Pigs Eye Landfill closing July 1, 1972, it will be necessary to change our method of disposing of enimals, rubbish and garbage picked up by our trucks. We will have two places to dump — the American Systems transfer sites at 1337 DeCourcey Road and 224 Starkey. These sites will be open during the following hours:

DeCourcey Road site - weekdays 7 a.m. to 6 p.m. - Saturdays 7 a.m. to 4 p.m.

Starkey site - weekdays ONLY 6 a.m. to 11 p.m.

In most cases we will dump at the Starkey site and will only dump at the DeCourcey site if a load must be dumped on Saturday or in an emergency. We will be charged for the full capacity of the truck whather the truck is fully loaded or not, so we will endeavor to load the trucks completely before going to the dump. The following procedure will be followed wherever possible:

PAPER TRUCK - If you have a full load or nearly so, dump at Storkey site at 6 a.m. each morning. If you have only a partial load, leave the truck at the Sanitation garage and they will fill it before dumping.

COMPLAINE DRIVERS OF EVENINGS AND WEEKEND SHIFTS - There will be a compactor (usually #521) parked on the Sanitation washrack (inside the building) and you will be able to transfer any rubbish or dead animals to it as necessary. On weekends when emptying paper baskets, you will be able to use the compactor for pickups. Check out a portable radio for use when driving the compactor. When leaving any material in the compactor that may have a bad odor during the weekend, be sure to spray it with the decdorizer provided at the washrack. Use the Hudson sprayer that dispenses the milky fluid. With animals that small at the time of pickup, such as skunks, either bury them on the spot where found if it is not in a residential area or other unlikely spot or else place them in a plastic bag (the complaint clerk has these bags).

OTHER CREWS HAVING RUBBISH TO DISPOSE OF - Whenever possible avoid dumping at the baler stations unless you have a <u>full load</u> of rubbish. Dump at a clean fill site or transfer the <u>rubbish</u> to a compactor.

This policy will be in effect as of the time of closing of Pigs Eye Landfill, June 30, 1972. It is our understanding that street sweepings and other clean fill will be accepted at the Pigs Eye site for several more weaks. Thank you for your cooperation.

Len Coffeen Public Works Foresan III Street Cleaning Division

Tues., July 4, 1972

Pig's Eye Closing Leaves Some Down in

The permanent closing of Pig's Eye Landfill last Saturday might not sit well with the thousands of St. Paul residents who hauled their own trash, landill boss Joe

Crea said.
"It's the end of an era." Crea said sadly last week. "People in everything from pickup trucks to Cadillacs used to make an outing going to the dump, even in the winter. New they Il have to go elsewhere or hire a haul-

THAT'S a decision to be faced by almost 3,000 persons each week who trucked their own trash to Pig's Eye, now closed under a directive from the Minnesota Pollution Control Agency (MPCA).

They can still haul their own refuse in cars, trailers

or pickup trucks to any of seven disposal sites in the St. Paul area. But figures show most of the trips will be longer and the fees steeper than those once charged at

The decision on where to dump must also be faced by the private haulers. The city's system will use the transfer and baler stations being operated by American Solid Waste Systems, a division of American Hoist & Derrick.

The rate for most of the city's customers is now 75 cents per week for an unlimited amount of refuse, but sources in Mayor Lawrence Cohen's office indicate the administration will have to ask for an increase to 90 cents per week to cover the increased cost of handling refuse.

Private individuals may also use the America Systems transfer station near Midway Stadium (1337 De Courcy Drive) for a minimum of St for a car and S3 for a trailer. The rate for a trailer at Pig's Eye was \$1.

The balor station on the West Side is not open to the general public.

At least two other area landfills, at Inver Grove Heights and in Washington County at Lake June, are not open to the general public.

Other landfill sites around the area are:

ANOKA landfill, 112 miles north of the junction of County Road 57 and flwy 10: Monday, Wednesday, Friday and Saturday, 8:30 a.m.-5:30 p.m.: Tuesday and Thursday, 8:30 a.m.-7:30 p.m.: 50 cents per cubic yard.

BELLAIRE Sanitation Service, cast of Willernie on County Road 12: Monday through Saturday, 10 a.m.-5 p.m.; 32 minimum for cars and trailers.

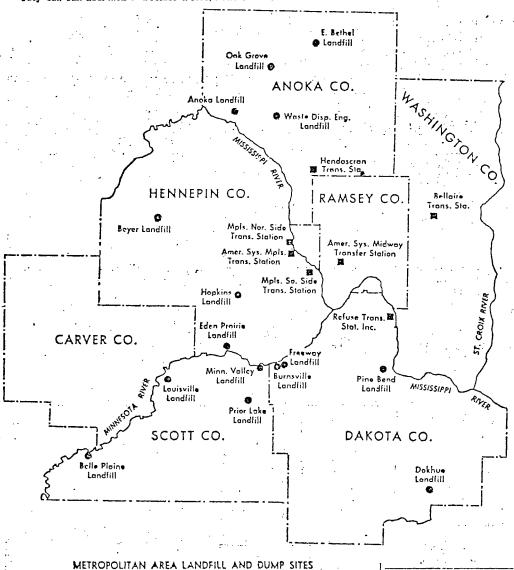
HENDASCRAN Landfill, 9151 Central Ave., N.E. Blaine,; Monday through Saturday, 8 a.m. 4:30 p.m.; \$2

WASTE DISPOSAL Engineering Landfill, Anoka County Road 18 south of Anoka County Road 16; Monday through Friday. 7 a.m.-5:30 p.m.; Saturday. 7 a.m.-4 p.m.; 75 cents for autos; \$1 for trailers and \$2 for pick-

PINE BEND sanitary landfill, 117th Street near Hwy, 57, in Dakota County; Monday through Friday, 8 a.m. 6 p.m. Monday through Friday 7 a.m. 7 p.m.; Saturday, 8 a.m.-6 p.m.; \$1 for autos, \$2 for trailers and pickups.

REFUSE. INC., South St., Paul southeast of intersection of South Concord Street and Hwy. 110; Monday through Saturday 10 a.m., 6 p.m.; St and \$1.50 for autos, \$2 minimum for trailers and pickups.

The Public Works Department, which compiled the list of locations, said provisions are also made at most landfill sites for disposal of appliances (from \$1 to \$3 for each appliance) and tires (20 cents to \$1).





June 29, 1972

Red Arrow 41 East Chicago Avenue St. Paul, Minnesota 55107

Attention: Richard Krawczewski

Gentlemen:

The bid for waste disposal your company submitted dated June 15, 1972, for service from July 1, 1972 through June 30, 1973, has been accepted.

We will appreciate prompt service and we look forward to doing business with you.

V. Hillstrom

General Foreman

Maintenance Department

cc: A. Holland

F. Vanyo



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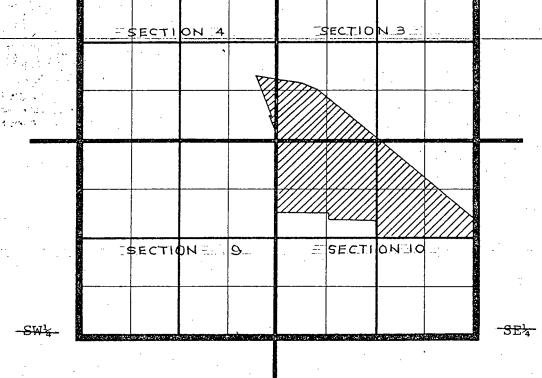
7. Hellelin

V. Hillstrom General Foreman Maintenance Department

cc: A. Holland F. Vanyo

RECORD OF LOCATION OF ABANDONED SOLID WASTE DISPOSAL SILE

~ '	Ramsey							
County	Kallisey	-						
Date of Clos	ure July,		<u> </u>					
	-	(month	and year	")				
;; ={	-							
Legal Land D								
(Give the qu	arter/quar	cter(s),	and met	es and b	ounds bo	undary	descripti	on if
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Lot number(s								
	d bounds des				, -			
the locati	on are avai	lable in t	he office	of the D	epartment	of Public	Works.	
	red sheet wh		-		and bounds	descrip	tion develo	ped from
maps on fi	le in the D	epartment	of Public	Works.		·		
								
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Area of Site in Acres (Estimated)	
Fill Depth in Feet (Estimated) 6' to 8'	
Types of Waste Disposed: ()	
Household X	
Industrial X Demolition X	
Hazardous	•
Sludge	
I hereby certify that, to the best of my knowledge abandoned solid waste disposal site is located as I	
the description of it contained herein represents	
of that site.	
	. 0 1
Oct. 72, 1975 Dail 1	Schoolst
Date County S	Solid Waste Officer
State of Minnesota	
County of Kausey	
On this 33 we day of the word, A. D. 19 15, before within and for said County, personally appeared	ne, a Notary Public
to me known to be the pe	erson who executed the
foregoing instrument, and acknowledged that _he exercise act and deed.	ecuted the same as
Notary Public	Kampit County Minn.
My commission	
	ALICE E BELAIR
This instrument was drafted by	Notary Public, Raniesy County, Minn. My Commission Explant April 1, 1977
Scott M. Gilbertson, P. E.	
(Name)	
234 City Hall	
(Address)	

All those parts of Sections 3, 4 and 10 in T28N-R22W described as follows:

Beginning at the east ½ corner of said Section 10; thence north, along the east line of said Section 10, a distance of 630 feet; thence northwesterly, deflecting to the left 51 degrees, a distance of 4,350 feet; thence northwesterly, deflecting to the left 4 degrees, a distance of 1,070 feet; thence northwesterly, deflecting to the left 11 degrees, 30 minutes, a distance of 295 feet; thence westerly, deflecting to the left 25 degrees, 30 minutes, a distance of 1,430 feet; thence southeasterly, deflecting to the left 115 degrees, 30 minutes, a distance of 1,235 feet; thence southwesterly, deflecting to the right 78 degrees, 30 minutes, a distance of 20 feet; thence southeasterly, deflecting to the left 76 degrees, a distance of 570 feet more or less to the south line of said Section 4; thence easterly along the said south line to the southeast corner of said Section 4; thence southeasterly to the point of beginning.

All that part of the north $\frac{1}{2}$ of Section 10 - T28N-R22W lying southwesterly of a line extending from the east $\frac{1}{4}$ corner of said Section 10 to the northwest corner of said Section 10, except the south 25 acres of the south $\frac{1}{2}$ of the NW $\frac{1}{4}$ of said Section 10 and except the south 5 acres of the west $\frac{1}{2}$ of the north 54.65 acres of the said south $\frac{1}{2}$.

NOTE: Distances and deflection angles measured from: City of St. Paul

Department of Public Works Maintenance Services, Pig's Eye Landfill
1971 Report, Topographic Map - reduced from 100 scale to 200 scale.

واول رو بنی Land Site Pago Eyeclandful

STATE OF MINNESOTA)
County of Ramsey) SS
Office of the Register of Deeds

This is to certify that the within instrument was filed for record in this owner at St. Paul on the day of A. D. 19 at 6 clock fil, and that the same was recorded in Ramsey County Records as Doc. No.

ROBERT T. GIBBONS
Register of Dads.
By Ober 1. Jobons

Lorald E. Mygaard 1944 Veity Hall

Name of S	ite <u>Pig</u>	's Eye Landfill
County	Ram	sey
Date of C	losure	July, 1972
4		(month and year)

Legal Land Description of Location of Abandoned Solid Waste Disposal Site (Give the quarter/quarter(s), and metes and bounds boundary description if other than full quarter/quarter(s), together with the Section, Township and Range Numbers; or, if located within platted subdivision(s), give the Lot number(s), Block number(s) and the name of the platted Subdivision(s):

A metes and bounds description of the landfill does not exist; however, maps depicting the location are available in the office of the Department of Public Works.

See attached sheet which is an approximate metes and bounds description developed from

maps on file in the Department of Public Works.

Sketch:

SECTION 4 TRECTION 3

SECTION 9 SECTION 10

SEL SEL

Area of Site in Acres (Estimated) 319	•		
Fill Depth in Feet (Estimated) 6' to 8'		·	
Types of Waste Disposed: ()			
Household X			
Industrial X Demolition X			
Hazardous			
Sludge			
		·	. ••
I hereby certify that, to the best of my knowledge, the abandoned solid waste disposal site is located as hereithe description of it contained herein represents the of that site.	in describ	ed and tha	t
Oct. 22, 1975 Defined &	chalit		
Date County Solid	Waste Of	ficer	S
			V
			<u>.</u>
State of Minnesota			3
County of Ramsey	•		
On this 32 nd day of the hew, A. D. 19/5, before me, a	Notary Pi	ıblic // /	đ
within and for said County, personally appeared to me known to be the person	D M	Schall	£
foregoing instrument, and acknowledged that _he execute			<u>.)</u>
free act and deed.		41	
- Clice E. E.	elasi	1	<u> </u>
Notary Public Fan My commission exp		inty Minn	7
	17/130	E E BYLAIR	,
This instrument was drafted by		Ranissy County, Minn Explain April 1, 197	
Scott M. Gilbertson, P. E.			
(Name)	•		
234 City Hall		•	
(Address)			

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Department of Public Works Maintenance Services, Pig's Eye Landfill
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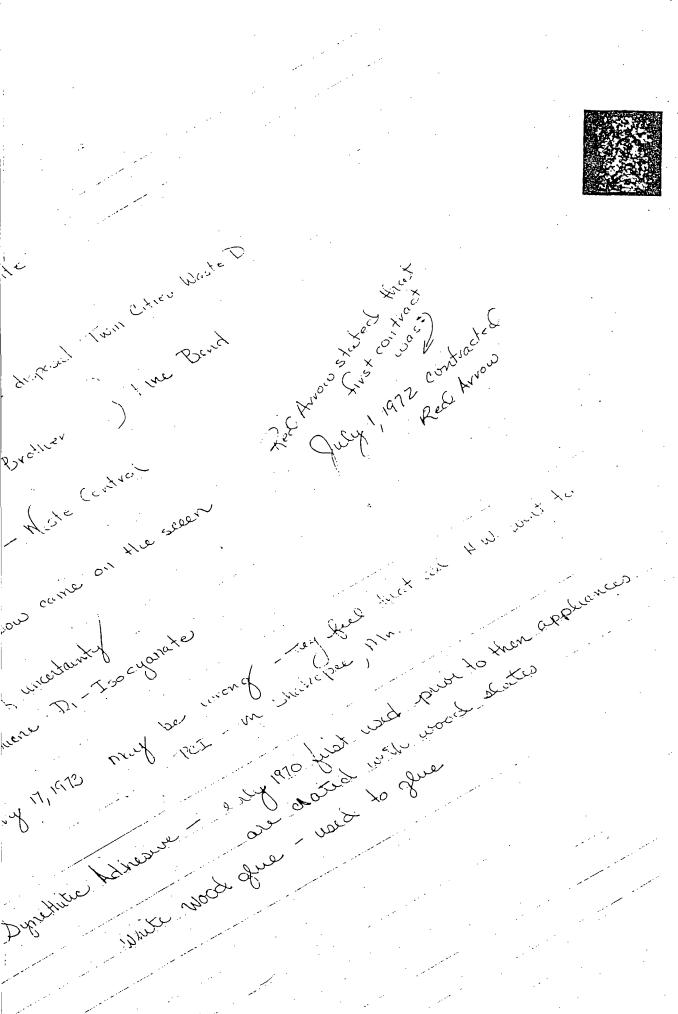
1920164
Land Site

Jo Eye Landful

STATE OF MINNESOTA)
County of Ramsey) SS
Office of the Register of Deeds

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Sound E. Mygaard 134 City Hall





ST. PAUL DIVISION

July 6, 1972

Wastes Section - Sewer Design Devision Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Attention: William Tschida Sewer Design

Dear Bill,

RE: Sewer Charge Adjustment On Boiler Water Usage For The First 6 Months of 1972.

I have completed the information that you will require to process a sewer charge adjustment for our boiler feedwater usage for the period of January thru June this year.

My calculations indicate a refund due to Whirlpool Corporation of \$2,005.00 for the 6 months ending June 30th.

If you have any questions or may require additional information please call.

Yours truly,

E. W. Hartung Facilities Engineer

EH/ba



ST. PAUL DIVISION

July 6, 1972

Wastes Section - Sewer Design Devision Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

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Sewer Design

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Yours truly,

E. W. Hartung Facilities Engineer

EH/ba



CITY OF SAINT PAUL

Capital of Minnesota

DEPARTMENT OF PUBLIC WORKS

234 City Hall & Court House 55102

DANIEL J. DUNFORD Acting Director of Public Works

July 13, 1972

Mr. Ed Hartung Whirlpool Corp. 850 Arcade St. St. Paul, Minn. 55106

Dear Mr. Hartung:

Please be advised that the Wastes Section of Sewer Design Division has moved to the Lowry Hotel, along with the rest of Public Works.

Our new address is as follows:

Wastes Section Sewer Design Division Department of Public Works Room 200 Lowry Hotel St. Paul, Minnesota, 55102

phone 223-5421

Yours very truly,

William L. Tschida

Wastes Technician

WLT/kw

MANUFACTURER'S ADDRESS 1061 E. 260th Street Euclid, Ohio PRODUCT CATEGORY YES OR NO Specify exact formula showing by weight. Indicate hazardor (2) Toxic	us ingredients with asterisk (*).
PRODUCT CATEGORY YES OR NO Specify exact formula showing by weight. Indicate hazardous by weigh	g percentage of every ingredient us ingredients with asterisk (*).
PRODUCT CATEGORY YES OR NO Specify exact formula showing by weight. Indicate hazardou by weight. Indic	us ingredients with asterisk (*).
4) Irritant	stic corrosion resistant
FLASH-BACK? YES NO _	
FLAME PROJECTION INCHES VISCOSITY S.U.S.	
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED ON HAZARDOUS SUBSTANCES ACT:	THE LABEL UNDER THE FEDERAL
Please see assay report attached.	
ing under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data. a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No; if yes, Registration No.	State size of containers 55 gallon State type of container used (glass oottle, tube, metal can, aerosol, etc.) and type of top or cap If packed in an aerosol or pressur
No. Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container of	Lized container, state the propel- Lant (s) used: not applicable ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
c. Indiana - Yes No ; if yes, as poison hazardous	Date Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes No D	Date
e. Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label	
It is agreeable with us to have Whirlpool Corporation use t	lucts with federal, state or
plied on Form S1R017028 for the purpose of registering prod municipal agencies operating poison control centers or with which product content information must be submitted by requ SIGNATURE OF MANUFACTURER	

PRODUCT NAME FINISH

PART NO. 711786 Couster.

TUFACTURER ECONOMICS LABORATORY, INC.	00762
MANUFACTURER'S ADDRESS Osborn Building St. Paul, Minn. 55102 PHONE (612	2) 224-4678
PRODUCT CATEGORY YES OR NO Highly Toxic (poison)	
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED ON THE LABEL UN HAZARDOUS SUBSTANCES ACT:	DER THE FEDERAL
DANGER Injurious to Eyes Harmful if Swallowed. For eye contact, flush with water for 15 minutes. Get prompt medic If swallowed, give large quantities of water or milk. Call a physi	
please specify and remit all pertinent data. 50 ounce.	containers 20, 33 and
Rodenticide Act) - Yes No X; if yes, Registration No. Description Reserved Process of Agriculture (Insecticide, Fungicide and bottle, tube, etc.) and type Overwrapped	container used (glass metal can, aerosol, of top or cap carton type. In aerosol or pressur
b. N.Y. City Fire Dept Yes No X; if yes, C. of A. lant (s) used: Date of Registration	, state the propel-
Attach a notarized affidavit certifying flash point and, ROUTING (This if aerosol, an affidavit certifying that the container out by Whirlpo	portion to be filled ol) oval
c. Indiana - Yes NoX; if yes, as poison hazardous Date	pt. Approval
d. Federal Hazardous Substances Act - Yes X No Date	
e. Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label	
It is agreeable with us to have Whirlpool Corporation use the information plied on Form S1R017028 for the purpose of registering products with fed municipal agencies operating poison control centers or with a government which product content information must be submitted by requirement of last SIGNATURE OF MANUFACTURER	eral, state or al agency to
PLACE OF BUSINESS Osborn Building St. Paul, Minnesota 55102	
33102	

PRODUCT NAME JET DRY

____PART NO. 712553__

MUTACTURER ECONOMICS LABORATORY, INC.	00763
MANUFACTURER'S ADDRESS Osborn Building St. Paul, Minn. 5510	02 PHONE (612) 224-4678
2) Toxic 3) Corrosive (poison)	dous ingredients with asterisk (*).
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED HAZARDOUS SUBSTANCES ACT: CAUTION: Harmful if swallowed. If swallowed, drink large quantities of milk, water of	
this product requires special registration and/or labeling under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data. a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - YesNo_X; if yes, Registration NoEffective Dateto	Packaging State size of containers 2 and 4 ounce liquids State type of container used (glas bottle, tube, metal can, aerosol, etc.) and type of top or cap plastic bottle If packed in an aerosol or pressur ized container, state the propellant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements. c. Indiana - Yes NoX; if yes, as poison hazardous product or exemption. Date of registration	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval Date Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes X No e. Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label	Date
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering production agencies operating poison control centers or with which product content information must be submitted by resident of MANUFACTURER Thomas M. Welle PLACE OF BUSINESS Osborn Building St. Paul, Minnesota	roducts with federal, state or lith a governmental agency to equirement of law.

WHIRLPOOL CORPORATION CHEMICAL SPECIALTY INFORMATION DATE July 31, 1972

PRODUCT NAME ELECTRASOL	PART NO. /11/8
UFACTURER ECONOMICS LABORATORY, INC.	00764
MANUFACTURER'S ADDRESS Osborn Building St. Paul, Minn. 55102	PHONE (612) 224-4678
PRODUCT CATEGORY 1) Highly Toxic (poison)	lous ingredients with asterisk (*). ate
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED OF HAZARDOUS SUBSTANCES ACT:	ON THE LABEL UNDER THE FEDERAL
DANGER Injurious to Eyes Harmful if Swallowed. For eye contact, flush with water for 15 minutes. If swallowed, give large quantities of water or mi	
this product requires special registration and/or labeling under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data.	Packaging State size of containers 20, 33, a 50 ounce. State type of container used (glas
a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No X; if yes, Registration No. Effective Date to	bottle, tube, metal can, aerosol, etc.) and type of top or cap Overwrapped carton type.
b. N.Y. City Fire Dept Yes No X; if yes, C. of A. No. Date of Registration	If packed in an aerosol or pressur ized container, state the propellant (s) used:
Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements.	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
c. Indiana - Yes No X; if yes, as poison hazardous product or exemption. Date of registration	Date Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes X No	Date
 e. Other, such as Economic Poison Laws. l. Please attach any independent laboratory test results 2. Please attach four copies of present label 	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering promunicipal agencies operating poison control centers or with which product content information must be submitted by reconstructed of Manufacturer I home M. Oleven	oducts with federal, state or the sovernmental agency to
PLACE OF BUSINESS Osborn Building St. Paul, Minnesota	55102

RODUCT NAME SOLID JET DRY	PART NO. 719475
FACTURER ECONOMICS LABORATORY, INC.	00765
MANUFACTURER'S ADDRESS Osborn Building St. Paul, Minn. 551	22 PHONE (612) 224-4678
!) Toxic	dous ingredients with asterisk (*). wetting agents with an
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED MAZARDOUS SUBSTANCES ACT:	ON THE LABEL UNDER THE FEDERAL
this product requires special registration and/or labeling under federal, state or city acts, laws, codes, etc., clease specify and remit all pertinent data. 3. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - YesNo_X_; if yes, Registration NoEffective Dateto	Packaging State size of containers 3-2 oz. bar State type of container used (glass bottle, tube, metal can, aerosol, etc.) and type of top or cap plastic basket If packed in an aerosol or pressurized container, state the propellant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements.	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval Date
product or exemption. Date of registration	Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes No X	Date
e. Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering production agencies operating poison control centers or which product content information must be submitted by respectively.	oducts with federal, state or the a governmental agency to
SIGNATURE OF MANUFACTURER Jhomus W. Users PLACE OF BUSINESS Osborn Building St. Paul, Minnesota	55102
THE OF DOCTORDS ASSESSED ASSESSED.	



PORT AUTHORITY OF THE CITY OF BAINT PAUL

330 MINNESOTA BUILDING, 4TH AND CEDAR, SAINT PAUL, MINN. 55101, PHONE (612) 2-4-5686

July 31, 1972

The Honorable Lawrence D. Cohen Mayor of the City of Saint Paul City Hall and Court House Saint Paul, Minnesota 55102

NOTICE OF TERMINATION PIGS EYE LAND FILL AREA

Dear Mayor Cohen:

In accordance with the terms and provisions of Paragraph 6 of that certain license agreement entered into the 21st day of February, 1967, between the Port Authority of the City of Saint Paul and the City of Saint Paul, the Port Authority hereby gives notice to the City that from and after the 1st day of October, 1972, the license agreement herein above referenced pertaining to dump and landfill operations on the premises therein described is terminated. Pursuant to said agreement the premises from and after such date, including the dump and landfill material placed thereon by City during the term of the agreement, shall become the property of the Port Authority.

Very truly yours,

Frank D. Marzitelli Executive Vice President

FDM:mks

cc: Port Authority Board of Commissioners

R. Scott Davies, Attorney

FR. D. MARZITELLI EXECUTIVE VICE PRESIDENT EUGENE A. KRAUT

GREGE BECKETT

OMMISSIONERS

ICHARD C. RADMAN

VICE PRESIDENT

LOUIS H. MEYERS

JOHN F. NASH

RICHARD E. ARETE

VICTOR J. TERRECO

JOHN L. BEG

LEGISLATIVE ADVISORS

JOHN TRACY ANDERSON, STATE SENATOR

RAY W. FARICY, STATE REPRESENTATIV



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PORT AUTHORITY OF THE CITY OF SAINT PAUL

330 MINNESOTA BUILDING, 4TH AND CEDAR, SAINT PAUL, MINN. 55101, PHONE (612) 224-5686

July 31, 1972

The Honorable Lawrence D. Cohen Mayor of the City of Saint Paul City Hall and Court House Saint Paul, Minnesota 55102

Dear Mayor Cohen:

On February 21, 1967, the Port Authority of the City of Saint Paul entered into a license agreement with the City allowing the City to operate an all purpose dump and landfill operation according to the sanitary land fill method. The City has ceased operations and the land use purposer specified in the license agreement have now been accomplished.

It is my understanding that the City will be required to add a 2-inch covering to the fill material currently on the premises. As you know, the Port Authority is attempting to locate a coal wharf terminal facility in this area. Construction of this facility may require the removal of certain amounts of said landfill and will require dredging operations which would provide the necessary covering for the landfill at no cost to the City. I am, therefore, proposing that we terminate the license agreement by means of the letter of Termination attached hereto and the Port Authority will proceed to supply and place such additional covering materials as are deemed necessary at such time as construction of the coal wharf terminal facility commences.

Very truly yours,

Executive Vice President

FDM:mks

cc: Port Authority Board of Commissioners

R. Scott Davies, Attorney

EXECUTIVE VICE PRESIDENT

EUGENE A. KRAUT ABBISTANT EXECUTIVE VICE PRESIDENT

GREGE BECKETT

COMMISSIONERS

ICHARD C. RADMAN

DEAN MEREDITH
VICE PRESIDENT

LOUIS H. MEYERS

HN F. NASH RIC

HARD E. ARETE VICTOR J. TEDESC

JOHN L. SEGL

LEGISLATIVE ADVISORS JOHN TRACY ANDERSON, STATE SENATOR

RAY W. PARICY, STATE REPRESENTATIVE



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EXECUTIVE VICE PRESIDENT

EUGENE A. KRAUT

GREGE BECKETT

COMMISSIONERS

RICHARD G. RADMAN PRESIDENT.

DEAN MEREDITH

BECRETARY

OHN F. NASH - - RICHARD E. ARE

VICTOR J. TEDESCO

JOHN L. BEGL

EGISLATIVE ADVISORS

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July 31, 1972

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Very truly yours,

Frank D. Marzitelli

Executive Vice President

FDM:mks

cc: Port Authority Board of Commissioners R. Scott Davies, Attorney

HK D. MARZITELLI

EUGENE A. KRAUT

CHIEF ENGINEER

OMMISSIONERS

RICHARD C. RADMAN DEA

EAN MEREDITH

Louis H. MEYERS

JOHN F. NASH

RICHARD E. ARETZ

VICTOR J. TEDESCO

JOHN L. BEGL

LICENSE AGREEMENT

THIS AGREEMENT, made as of the 2/2 day of 2/2 day, 1967, by and between PORT AUTHORITY OF THE CITY OF SAINT PAUL, a Body Politic and corporate in the State of Minnesota, hereinafter designated "Port Authority", and the CITY OF SAINT PAUL, a municipal corporation of the State of Minnesota, hereinafter designated the "City",

WITNESSETH:

That the said Port Authority, in consideration of the sum of One Dollar (\$1.00) to it in hand paid by said City, the receipt and sufficiency whereof are hereby acknowledged, and in consideration of the faithful performance by said City of its covenants hereinafter set forth, hereby grants unto said City the right, license and privilege to enter upon and to use, for an all purpose dump and landfill operations of said City the following described lands of said Port Authority situate in the County of Ramsey and State of Minnesota, to-wit:

Except part northeast of a line drawn from the northwest corner of southwest 1/4 of northeast 1/4 to the southeast corner of said 1/4 section the south 1/2 of the northeast 1/4 of Section 10, Township 28 North, Range 22 West, all that part of the north 1/2 of the northwest 1/4 of Section 10, Township 28 North, Range 22 West, lying southwesterly of a straight line extending from the northwest corner to the southeast corner of said north 1/2 of the northwest 1/4;

Also, the north 54.65 acres of the south 1/2 of the northwest 1/4 of said Section 10, excepting therefrom the south 5 acres of the west 1/2 of the said north 54.65 acres of the south 1/2 of the northwest 1/4 of said Section 10, containing 89.65 acres, more or less;

provided that such all purpose dump and land fill operations shall be according to the so-called Sanitary Fill Method with the dump and

land fill deposited in layers not more than seven feet (7') in depth and covered at the end of each day with earth, rubble or other waste material; and provided that such grant of said right, license and privilege hereunder, by said Port Authority unto said City, shall be subject to said City's observance and performance of the following requirements and conditions:

- 1. That said all purpose dump and land fill operations by said City, hereunder, shall not result in an increase of the elevation of the subject hereinabove described premises higher than 704 feet above mean sea level computed according to City datum; and that said City shall supervise said all purpose dump and land fill operations and the subject premises when the same shall be used for such purposes by said City hereunder.
- That said City shall maintain a water fire line for fire protection and provide and maintain an outlet for any drainage lines which may empty into said all purpose dump and land fill, imposed by said City upon said premises, hereunder; and that said City shall, as such shall become necessary, extend said water fire lines for protection in said all purpose dump and land fill area; that said water fire line shall be installed by and at the expense of said City.
- 3. That said City shall conduct its operations, hereunder, so as to permit the installation and maintenance of a roadway; and that said City shall perform all of its operations, hereunder, at its sole cost and expense and subject to supervision and direction by said Port Authority consistent herewith.
- 4. That said City shall indemnify and save harmless said Port Authority, its successors and assigns, from all liability, cost and expense on account of injury to property or injury to or death of any person which may be caused or occasioned by reason of the work performed by said City on the hereinabove described premises of said Port Authority, hereunder.

O

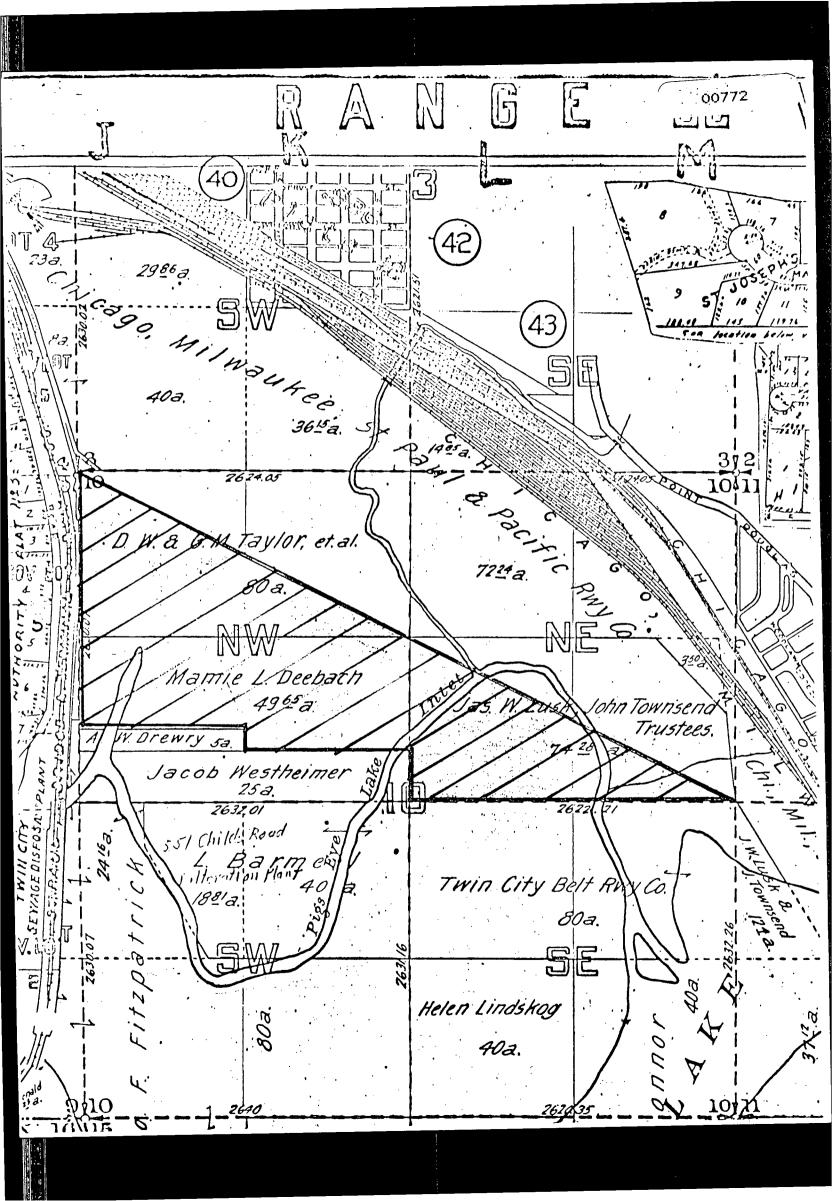
5. That said City shall not allow the dumping of large metal objects, such as car bodies, refrigerators, stoves, etc., demolition material larger than one cubic foot in volume, and further shall not allow disposal of stumps or trees that are larger than four (4) inches in diameter upon these premises.

6. That this Agreement shall extend to and bind said parties and their respective successors and assigns provided, however, that said Port Authority, without liability for damages therefor, may terminate this Agreement at any time by giving said City sixty (60) days notice in writing of such termination, specifying the effective date of the same; and that the all purpose dump and land fill material placed upon said Port Authority's premises, by said City, hereunder, shall become the property of said Port Authority; and provided further that said City; except as respects any liability theretofore incurred, hereunder, without liability for damages therefor, may terminate this Agreement at any time by giving to said Port Authority sixty (60) days notice in writing of such termination and specifying the date of the same.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

ment to be executed as of the day and	l year first above written.
In Presence Of: Action of the State of the	PORT AUTHORITY OF THE CITY OF SAINT PAUL By: President Secretary
	CITY OF SAINT PAUL
	By: Thomas R. Byrne Mayor
	/s/ Robert F. Peterson Commissioner of Public Works
	/s/ Harry Marshall City Clerk
Form Approved: 1	Countersigned:
Jane Ward	/s/ Joe Mitchell
Assistant Corporation Counsel	City Comptroller
·	
Approved as to form and execution	
this 3rd day of March . 1967.	

/s/ Paul F. Kelly
Assistant Corporation Counsel



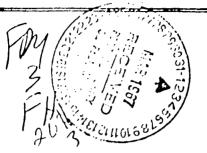
232291

CITY OF ST. PAUL OFFICE OF THE CITY CLERK COUNCIL RESOLUTION—GENERAL FORM COUNCIL 00773

PRESENTED BY COMMISSIONER

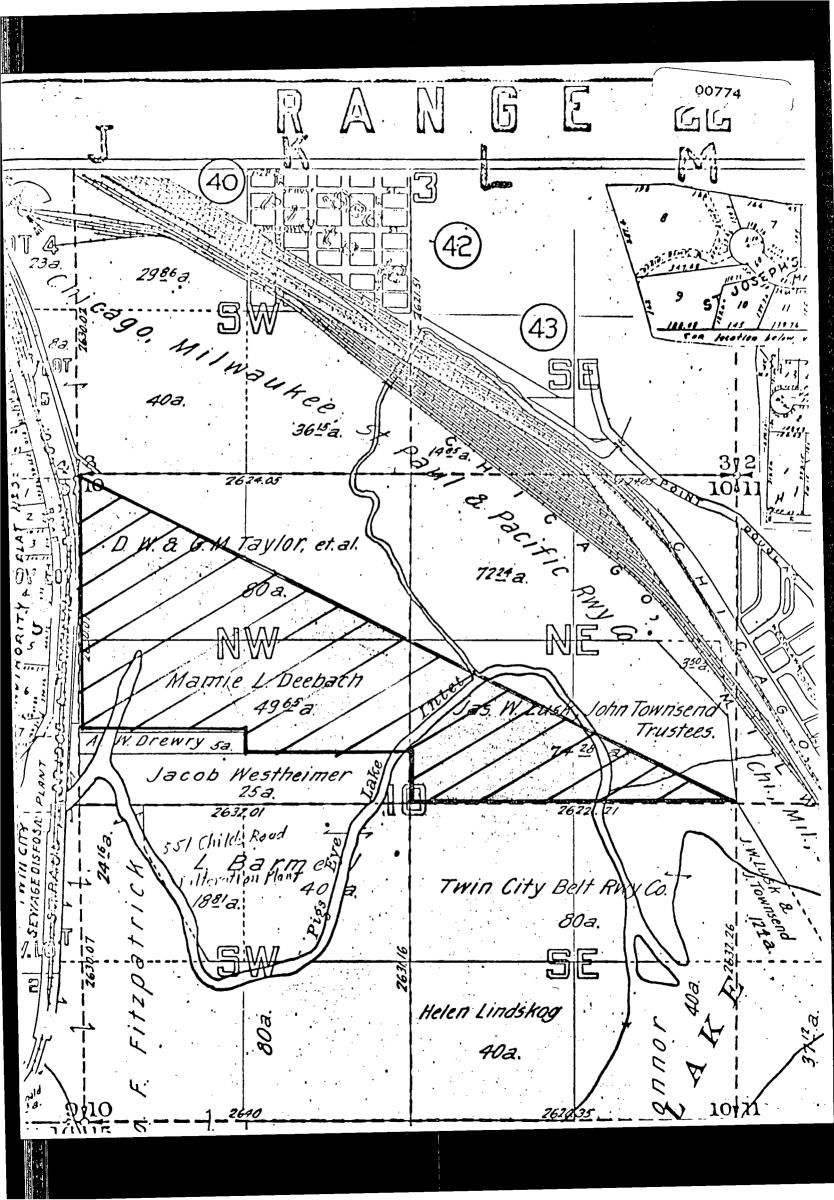
Yeas

Tedesco Mr. President, Byrne



RESOLVE, That the proper city officers of the City of Saint Paul are hereby authorized and directed to enter into an agreement with the Port Authority of the City of Saint Paul concerning the use of parts of the Pigs Eye Lake area for sanitary landfill operations, as more particularly set forth in said agreement.

		•	MA	32 1	164
COUNCIL	LMEN		Adopted by the Council		19
8	Nays		MAR 2	1967	
Carlso	n	,		A. 11g	
Dalglis	sh		Approved		19
Hollan	d	In Favor			
Meredi	ith	III FAVOR			
Peters	on		·		Mayor
Tedesc	10	Against			



ROUGH DRAFT

Dear Maryn Che NOT

NOTICE OF TERMINATION

FRANK D. MARZITELLI Executive Vice President

Frank: you should obtain boardauthorization

60 your protection 7-31-72

Radman - OK

Meyers - OK

Maredith - OK

Vash - OK

RODUCT NAME		AUG 7 REC'D BATE 871/82
	WHIRLPOOL GARBAGE COMPACTOR AEROSOL	PART NO.
FACTURER	AIRWICK INDUSTRIES, INC.	00776
AN_ACTURER'S ADD	RESS 111 COMMERCE ROAD, CARLSTADT, N	07072 .J. PHONE (201) 933-8200
	by weight. Indicate h X Essential oils (dist X Liquid hydrocarbons X Freon 11 & 12.	showing percentage of every ingredient mazardous ingredients with asterisk (*) tilled from natural plants)
IST ALL NECESSARY AZARDOUS SUBSTANC	WARNING STATEMENTS AND ANTIDOTES REQUI	RED ON THE LABEL UNDER THE FEDERAL
or	ontents under pressure. Do not puncture r open flame. Exposure to temperature a an in fire or incinerator may cause burs	above 120°F. in sun, or discarding
ng under federal,	quires special registration and/or labe state or city acts, laws, codes, etc., remit all pertinent data.	State size of containers 9 02
Rodenticide Ac YesNo_X_;	if yes, Registration Noto	etc.) and type of top or cap If packed in an aerosol or pressu
·		
N.Y. City Fire No. Date of Regist Attach a notar if aerosol, an	ration ized affidavit certifying flash point a affidavit certifying that the containe C.C. requirements.	and, ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
N.Y. City Fire No. Date of Regist Attach a notar if aerosol, an conforms to I. Indiana - Yes	rationized affidavit certifying flash point and affidavit certifying that the contained	lant (s) used: Freon 11 & 12. and, ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval Date Engineering Dept. Approval
N.Y. City Fire No Date of Regist Attach a notar if aerosol, an conforms to I. Indiana - Yes_ productor	ration rized affidavit certifying flash point a affidavit certifying that the containe C.C. requirements. No X; if yes, as poison hazardo	lant '(s) used: Freon 11 & 12. and, ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval Date
N.Y. City Fire No	ration ized affidavit certifying flash point a affidavit certifying that the containe C.C. requirements. No X; if yes, as poison hazardo exemption Date of registration	lant (s) used: Freon 11 & 12. and, ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval Date Engineering Dept. Approval Date Date Date Page 18-7-72



CITY OF SAINT PAUL

Capital of Minnesota

DEPARTMENT OF PUBLIC WORKS

234 City Hall & Court House 55102

DANIEL J. DUNFORD
Acting Director of Public Works

August 7, 1972

Mr. E. W. Hartung Facilities Engineer Whirlpool Corporation 850 Arcade Street St. Paul, Minnesota 55106

Dear Mr. Hartung:

Please find enclosed the following:

- 1) The application forms we would like you to use in your future computation of your sewer charge refund.
- 2) Completed forms for the first six months of this year.
- A copy of the computations used to adjust the first month's clearwater meter readings.
- 4) Copies of the 1972 Sewer Service charge.

Since each weir's meter reading cannot separately be attributed to a specific well, a factor is applied to each well. This factor is the percentage of total well water that discharges to the storm sewer.

When submitting these application forms in the future, please include the form you drew up which gives us your clearwater meter readings, and a copy of the meter readings from the boilers make up water.

If you have any questions please call Mr. William Tschida at 223-4254.

Yours very truly,

Henry W. Jackson

Civil Engineer III

HWJ/WLT/bp Enc.

COMPLETED FORMS FOR JAN-JUN 1972 (Sign & Return all six Forms to Wastes Section)

MONTH		REFUND	•
JAN		\$ 306.53	
FEB		373.46	
MAR		360.34	
APR		7,359.24	,
MAY		-3,984.07	6,426.55
JUN		7,567.65	
	TOTAL	\$19,951.29	* 22, 393.77

WATER DEPARTMENT - CITY OF ST. PAUL, MINN.

SEWER SERVICE CHARGES

Established by Council File 256826

Effective January 1, 1972

Minimum Charges, based upon the size of the water meter, in the amounts as follows:

Water Meter Size	Charge
¾" Meter or smaller	\$ 3.60 per quarter
1" Meter	6.30 per quarter
1¼" Meter	2.80 per month
1½" Meter	4.40 per month
2" Meter	10.00 per month
3" Meter	21.00 per month
4" Meter	52.00 per month
5" Meter	75.00 per month
6" Meter	100.00 per month
8" Meter	172.00 per month
10" Meter	246.00 per month
12" Meter	340.00 per month

Basis of charges shall be based upon the metered water consumption as follows:

First	100,000 cubic feet per month — 23¢ per 100 cubic feet
Next	200,000 cubic feet per month — 21.5¢ per 100 cubic feet
Next	200,000 cubic feet per month — 19.5¢ per 100 cubic feet
Next	500,000 cubic feet per month — 17.5¢ per 100 cubic feet
All over	1 000 000 cubic feet per month $-15d$ per 100 cubic feet

<u>Further</u>, those properties served by a meter of 1" size or smaller, the Sewer Service Charge for the first quarterly statement rendered for 1972 shall be the rate to be charged the same property for the remaining quarters of the year 1972.

<u>SEWER SERVICE CHARGES</u>—According to law, the Sewer Service Charges must be collected with the Water Bill.

PRIVATE SUPPLIES—Sewer Service Charges continue until a written request is received in the Water Department to seal the well.

1972 SEWER SERVICE CHARGE

CCF			
1000 = \$	230,00	26	4325
2	445.	27	4475.
33	660.	28	4625.
4 .195	<u>855.</u>	29	4775.
5.195	1,050.	30	4925.
6	1,225.	31	5075.
-7175	1,400.	32	5225.
8		33	5375.
9	1,750.	34	5525.
.10	1925.	35	5675.
11	2075.	36	5825.
12		37	5975
1315	2375.	38	6125.
14	Z52 <i>5</i>	39	6275.
15	2675.	40	6425.
16	2825.	41	6575.
17	29.75.	42	6725.
18	3125.	43	6875.
19	3275,	44	7025.
20	3425.	45	7185.
21	35 75.	4-6	7325.
_22	37 <i>25.</i>	47	7475.
23	38757	48	7625.
24	4025.	49	77.75.
25	4175.	50	7925.
	Water Meter Size	Charge	
	4" Meter or smaller 1" Meter 14" Meter 14" Meter 14" Meter 2" Meter 3" Meter 4" Meter 5" Meter 6" Meter 8" Meter	6.30 per quarter 2.80 per month 4.40 per inonth 10.00 per month 21.00 per month 52.00 per month 75.00 per month 100.00 per month 172.00 per month 246.00 per month	

ADJUSTMENT TO CLEARWATER METER READING (March 16, 1972 thru April 28, 1972 only)

BLDG. # 17 (Calibrated 7/8" High) 60° WEIR

BLDG #21 (Calibrated 1/4" High) 90° WEIR

3,551,000 gals for 43 days = 57 gpm

32,700,000 gals for 43 days = 528 gpm

57 gpm = $4\frac{1}{2}$ '' $4\frac{1}{2}$ '' - 7/8'' = 3 5/8'' 3 5/8'' = 31.5 gpm 528 gpm = 9" 9" = 1/4" = 8 3/4" 8 3/4" = 498 gpm

31.8 gpm for 43 days = 1,969,056 gals

498 gpm for 43 days = 30,836,160 gals.

1,969,056 gals + 30,836,160 gals

· TOTAL

32,805,216 gals

MONTH OF OCTOBER 19 72

BILLING DATE 10-24-72

6" Sparling 16377 852 Arcade St.

Well 484 8" Sparling 37997 837 Arcade St.

City Supply 4" HER. C. 3032084 838 Arcade St.

U) L	7, 7, 6466 51.	
1.	WELLS	•
	A) TOTAL CONSUMPTION	
	Well 323 Consumption 16000 + Well 484 Consumption 33272	. 49272 ccf
	B) TOTAL CLEARWATER	
	Bldg. 17 Clearwater 4,193,500 + Bldg. 21 Clearwater 24,294,000 28,487,500 GALS: 748	. <u>38085</u> ccf
	(DATE: From <u>SEP 29 '72</u> to <u>OCT 27</u>)	
	C) SANITARY SEWAGE FACTOR	
	A-B = Factor	
	49272-38085 = 11187 =	0.22705
	49272 49272	
	D) ADJUSTED CONSUMPTION	
	(Well 323 Consumption) X (C)	· <u>3633</u> ccf
	(Well 484 Consumption) X (C)	. 7554 ccf
	E) ADJUSTED CHARGE	
	Well 323 783,44 + Well 484 1496.95	
	\$2280.39	. <u>\$ 2280.39</u>
	F) ORIGINAL CHARGE	
	Well 323 2825,°° + Well 484 <u>5415</u> .80	
	\$ 8 Z 4 Q 8 0	. \$ 8240.80
	G) TOTAL WELL REFUND	\$.5960.41

11.	CIT	Y SUPPLY		
	A)	TOTAL CONSUMPTION		3469 cc
	в)	TOTAL BOILER FEEDWATER		
		970,000 GALS : 748.	• • • • • • • • • • • • • •	<u>1297</u> co
		(DATE: From	to)	
	c)	95% TOTAL BOILER FEEDWATER	• • • • • • • • • • • • • • • • • • • •	
	D)	ADJUSTED CONSUMPTION (A-C)		<u>2302</u> cc
	E)	ADJUSTED CHARGE	• • • • • • • • • • • •	\$ 509.93
	F)	ORIGINAL CHARGE		\$ 751.46
	G)	TOTAL CITY SUPPLY REFUND		\$ 241.53
	ТО	TAL REFUND		
•	A)	WELL REFUND (1-G)	• • • • • • • • • • • • • • • • • • • •	\$ 5960.41
	в)	CITY SUPPLY REFUND (II-G)	• • • • • • • • • • • • • • • • • • • •	\$ 241.53
				\$ 6201.94
			SIGNED Silfattion	9
			TITLE FACILITA	ENGE
			DATE AND 27	1972

MONTH OF SEPTEMBER 19 72

BILLING DATE 9-22-72

Well 323 6' 8

Well 484

City Supply

Well 323 6" Sparling 16377 852 Arcade St.	8" Sparling 37997 837 Arcade St.		y Supply C. 3032081 ade St.	4
I. WELLS				
A) TOTAL CONSUMPTION	,	· .		. •
Well 323 Consumption + Well 484 Consumption B) TOTAL CLEARWATER	17151 30490 47641	· · · · · <u>4</u>	76.41	CCF
Bldg. 17 Clearwater + Bldg. 21 Clearwater 3		· · · · <u>4</u>	<u> 5942</u>	CCF
(DATE: From AUG	25 72 to <u>SEP</u>	29)		
c) SANITARY SEWAGE FACT	OR			
$\frac{A-B}{A}$ = Factor				· .
47641-469	742 = 699	=	01467	
47641	47641			-
D) ADJUSTED CONSUMPTION		<u> </u>		· ·
(Well 323 Consumptio	n) X (C)		252	CCF
(Well 484 Consumptio	n) X (C)		447	CCF
E) ADJUSTED CHARGE Well 323 + Well 484 \$ 272.55		\$	272.°	0
ב/ סטוכואאן בוואסכב				

F) ORIGINAL CHARGE

2997.65 Well 323 2997.65 + Well 484 4998.50

\$ 7996.15

G) TOTAL WELL REFUND . (F-E)

11.	CIT	Y SUPPLY	•			
	A)	TOTAL CONSUMPTION			_/849	CCF
	B)	TOTAL BOILER FEEDWATER				>
		965,000 GALS : 748.	• • •		1290	CCF
		(DATE: From	to)		
	c)	95% TOTAL BOILER FEEDWATER	· • • •		1161	CCF
	D)	ADJUSTED CONSUMPTION (A-C)			688	CCF
	E)	ADJUSTED CHARGE	• • • •		\$ 158.24	<u>L</u>
	F)	ORIGINAL CHARGE			\$ 412.54	-
	G)	TOTAL CITY SUPPLY REFUND			\$ 254.30)
111.	Τo	TAL REFUND				,
٠.	A)	WELL REFUND (I-G)			\$ 7724.15	<u>-</u>
	B)	CITY SUPPLY REFUND (II-G)		• • • • • • •	\$ 254.30	<u></u>
	 :				\$ 7978.45	<u></u>
			SIGNED	Wathar		
			TITLE	FACILITIES	ENGR	·
			DATE	NOV 27, 19	97Z	_

MONTH OF AUGUST 19 72

BILLING DATE 8-21-72

Well 323 6" Sparling 16377 852 Arcade St. Well 484 8" Sparling 37997 837 Arcade St. City Supply 4" HER. C. 3032084 838 Arcade St.

- I. WELLS

 A) TO
 - A) TOTAL CONSUMPTION

	323 Consumption					٠.										
+ Well	484 Consumption	33484	_ •		•	•	•		•	• .	• _	50	4 -	78	CCF	=
		50476													_	

- B) TOTAL CLEARWATER
 - Bldg. 17 Clearwater 3,943,600 + Bldg. 21 Clearwater 20,167,000

24,110,600 GALS : 748 32233 CC

(DATE: From JUL 28 '72 to AUG 25)

C) SANITARY SEWAGE FACTOR

$$\frac{A-B}{A}$$
 = Factor

D) ADJUSTED CONSUMPTION

(Well 323 Consumption)	Χ	(C)	•	•	•	•	•	٠.	•	•	•	•	•	•	•	•	٠	 6	143)	_CCF
(_	—		
(Well 484 Consumntion)	γ	(1)																 ~	10/	•	CCE

E) ADJUSTED CHARGE

\$ 3490,33 <u>\$ 3490,33</u>

F) ORIGINAL CHARGE

\$ 8421.70\$ 8421.70

٠ ١ إ	Cii	11 301 FE1		
	A)	TOTAL CONSUMPTION	1178	_CCF
£.	B)	TOTAL BOILER FEEDWATER		
		630,000 GALS ÷ 748	842	_CCF
		(DATE: From		
-	c)	•	200	_CCF
	D)	ADJUSTED CONSUMPTION	378	_CCF
	E)	ADJUSTED CHARGE	\$ 86.94	-
:	F)	ORIGINAL CHARGE	\$ 268.27	-
⁻ .*"	G)	TOTAL CITY SUPPLY REFUND	\$ 181.33	-
111.	TO	DTAL REFUND		
	A)	WELL REFUND (1-G)	\$ 4931.37	Z
	8)	CITY SUPPLY REFUND (11-G)	\$ 181,33	<u>.</u>
		en e	\$ 5112.70	=
		SIGNED MATTER.	u()	_
		TITLE FACILITIES	ENGR	
		DATE 180 27	1972	

00788

BILLING DATE 7-25-72

611		323 ling 16377 ade St.	8'' Sp	Well 484 arling 37997 rcade St.		City S 4" HER. C. 838 Arcade	3032084	
1.	WEL	LS	an en	-	,			
	A)	TOTAL CONSUMPTION	. · .				· Ý	
	+	Well 323 Consumpti Well 484 Consumpti		· · · · · ·		<u>477</u>	57	_CCF
	в)	TOTAL CLEARWATER	47757				-	
	.+	Bldg. 17 Clearwate Bldg. 21 Clearwate	1 73 5:10 CM		3	37	177	CCF
		(DATE: From JU		72 to	· _	_		
	c)	SANITARY SEWAGE FA	CTOR	•				
	-	A-B = Factor		,				
		<u>47757 - 37</u> 47757	7/77	= <u>10580</u> 4775		<u>0.2</u> 7	2154	
	D)	ADJUSTED CONSUMPTI	014					
		(Well 323 Consumpt	ion) X (C)			37	730	CCF
		(Well 484 Consumpt	ion) X (C)			68	350	CCF
	E)	ADJUSTED CHARGE		. •				
		Well 484 1373.	35 75					
		\$ 2176	.10			· . \$ 21	76.10	<u>)</u>
	F)	ORIGINAL CHARGE	•			: '		
•	+	Well 323 2950. Well 484 5063.						
		\$ 8013	.55			\$ 80	13.55	
	G)	TOTAL WELL REFUND	,			· ·\$_58	37.45	

(F-E)

II. LII	IY SUPPLY		•	•	
(A)	TOTAL CONSUMPTION	• • • •		2808	CF
в)	TOTAL BOILER FEEDWATER				
	902,000 GALS : 748.		• • • • • •	1206	CF
•	(DATE: From	to)		
c)	95% TOTAL BOILER FEEDWATER			1146	CF
D)	ADJUSTED CONSUMPTION (A-C)	• • • • • • • ·		1602	CF
E)	ADJUSTED CHARGE	• • • •		\$ 359.43	
- F)	ORIGINAL CHARGE			\$ 618.72	
(G)	TOTAL CITY SUPPLY REFUND	• • • • •		\$ 259.29	
III. TO	DTAL REFUND			•	
A)	WELL REFUND (1-G)		· · · · · · · · ·	s 5837.45	
В)	CITY SUPPLY REFUND (II-G)	• • • •	· · · · · · · · ·	\$ 259.29	
				\$ 6096.74	
		SIGNED	Enstattin	rg)	
٠.		TITLE	FACILITIES	ENGR	
	· · · · · · · · · · · · · · · · · · ·	DATE	101. 27	1972	

APPLICATION FORM FOR PARTIAL REFUND OF SEWER SERVICE CHARGES

MONTH OF JUNE

Well 484 City Supply Well 323 4" Her. C. 3032084 8" Sparling 37997 6" Sparling 16377 838 Arcade St. 837 Arcade St. 852 Arcade St. BILL 0-21-72 6-21-72 DATE: WELLS A) TOTAL CONS Well 323 Cons + Well 484 Cons B) TOTAL CLEARWATER .36,170,700 GALS Bldg. 17 + Bldg. 21 **-** 748 (Date: From 5-26-72 to 6-30) ·CCF c) FACTOR 0.6799 Total Clearwater Total Well Cons D) CLEARWATER DISTRIBUTION (Well 484 Cons) X (Factor) E) ADJUSTED CONS (Well 323 Cons) - (Well 323 "D") (Well 484 Cons) - (Well 484 "D") CCF F) ADJUSTED CHARGE 4238.73 G) ORIGINAL CHARGE 11518.30

(G-F)

÷ 748

11.	CIT	Y SUPPLY		,
	A)	TOTAL FEEDWATER		1,102,000 GALS
		(Date: From	to)	1473ccf
	в)	95% TOTAL FEEDWATER		CCF
	c)	TOTAL CONS		3646 CCF
	D)	ADJUSTED CONS (C-B)		2246 CCF
	E)	ADJUSTED CHARGE		\$ 497.89
	F)	ORIGINAL CHARGE		\$ 785.97
	G)	TOTAL CITY SUPPLY REFUND (F-E)		\$ 288.08
ш.	TO	OTAL REFUND		
	We	ell Refund (I-H)		.5 7279.57
	+	City Supply Refund (II-G)		.\$ <u>288.08</u>
				\$ 7567.65
			SIGNED	
-			TITLE	
			DATE	

APPLICATION FORM FOR PARTIAL REFUND OF SEWER SERVICE CHARGES

MONTH OF MAY 19 72

	•				
6" Sp	ll 323 arling 16377 rcade St.	Well 484 8" Sparling 37997 837 Arcade St.		City Supply 4" Her. C. 303208 ¹ 838 Arcade St.	4
1. W	ELLS				
Α) TOTAL CONS		•		
	Well 323 Cons +	- Well 484 Cons		. 51016	CCF
В) TOTAL CLEARWATE	i.R			
	Bldg. 17 + Bldg	g. 21	• • • • •	. 30,680,200	
	(Date: From 4	-28-72 to 5-26)		41016	- 748 - CCF
С) FACTOR				
	Total Clearwate Total Well Cons			. 0.8040	
D) CLEARWATER DIST	RIBUTION			
	(Well 323 Cons)	X (Factor)		15594	_ccF
	(Well 484 Cons)	X (Factor)		. 25423	CCF
E) ADJUSTED CONS			•	
	(Well 323 Cons)	- (Well 323 "D")		3801	CCF
	(Well 484 Cons)	- (Well 484 "D")	• • • • •	6198	CCF
F) ADJUSTED CHARGE	<u>:</u>		·	
	Well 323 + Well	484		\$ 2075.85	5
· G) ORIGINAL CHARGE	•			
	Well 323 + Well	484		\$ 5733.12	-
Н) TOTAL WELL REFU (G-F)	JND	• • • •	\$3657.2	<u>7%</u>



LAWRENGE D. GOHEN

CITY OF SAINT PAUL

OFFIGE OF THE MAYOR

August 8, 1972

Mr. Frank D. Marzitelli Executive Vice President Port Authority of the City of Saint Paul 330 Minnesota Building Saint Paul, Minnesota

Re: Notice of Termination Pigs Eye Landfill Area

Dear Mr. Marzitelli:

I am in receipt of your correspondence dated July 31, 1972 indicating that the Port Authority is willing to terminate the license agreement for operation of the Pigs Eye Landfill under agreement dated the twenty-first day of February, 1967 between the Port Authority of the City of Saint Paul and the City of Saint Paul.

In accordance with the terms and provisions of paragraph 6 of that agreement, the City of Saint Paul hereby waives the time provisions with respect to notice and requests that the Port Authority immediately implement the termination of the license agreement.

It is my understanding that this will result in the Port Authority's assuming the responsibility to supply and place any additional covering materials deemed necessary by state law or the regulations of the Department of Natural Resources and the Pollution Control Agency. It is further my understanding that these duties will be assumed regardless of the outcome of the location of the proposed coal wharf terminal facility in this area. We both understand that the construction of such a facility is subject to approval by affected local agencies having jurisdiction.

Very truly yours,

Lawrence D. Cohen

Mayor

LDC:jr



CITY OF SAINT PAUL

Capital of Minnesota

DEPARTMENT OF PUBLIC WORKS

234 City Hall & Court House 55102

DANIEL J. DUNFORD
Acting Director of Public Works

August 9, 1972

Mr. Ed Hartung Facilities Engineer Whirlpool Corp. 850 Arcade St. St. Paul, Minn. 55165

Dear Mr. Hartung:

As per your phone conversation with Mr. Dennis Grittner, we would like to make a formal request that the water inlet on both the 90° and 60° weirs at Whirlpool be modified to comply with standard engineering practices. Leupold and Stevens "HYDROGRAPHIC DATA BOOK" states "...In order to effectively eliminate wave action and surges from any and all causes the area of the water inlet (of the stilling well) should be 1/1000 the area of the stilling well." Using this as a guide line, the correct diameter of the inlet to be compatible with the 12'' diameter stilling well should be approximately 3/8''.

It is our opinion that minimizing the wave action in the stilling well in this manner will give Whirlpool Corporation a more equitable sewer service charge refund.

Future correspondence on this matter may be addressed to Mr. Grittner.

Yours very truly,

Henry W. Jackson Civil Engineer III

HWJ/WLT/kw

WHIRLPOOL CORPORATION CREMICAL SPECIALT	Y INFORMATION DATE 8/14/72
PRODUCT NAME Cascade	PART NO. 719474 Como
MANUFACTURER Procter & Gamble	00795
MANUFACTURER'S ADDRESS Cincinnati, Ohio	PRONE (513)-562-1100
PRODUCT CATEGORY 1) Highly Toxic (poison)	dous ingredients with asterisk (*).
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED HAZARDOUS SUBSTANCES ACT: Front Panel: CAUTION: Eye irritant-Harmful if swallowed Side Panel: CAUTION: In case of eye contact flush with was swallowed give water or milk. Keep C	er. Call a physician. If
All emergency safety questions should be referred to a Procte (513-562-1100, 24 hour availability) or to the consumer's 1	
this product requires special registration and/or label- ing under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data.	Packaging State size of containers 20,35, 50
a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No x; if yes, Registration No. Effective Date to b. N.Y. City Fire Dept Yes No; if yes, C. of A. No.	State type of container used (glass bottle, tube, metal can, aerosol, etc.) and type of top or cap Foil Overwrapped Carton If packed in an aerosol or pressurized container, state the propellant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements. c. Indiana - Yes No x ; if yes, as poison hazardous	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
productor exemption Date of registration	Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes x No	Date
 e. Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label 	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering primunicipal agencies operating poison control centers or with which product content information must be submitted by resident of Manufacturer and the submitted by resident of BUSINESS when the submitted of BUSINESS with the sub	oducts with federal, state or th a governmental agency to quirement of law.

S1R017028

WHIRLPOOL CORPORATION CHEMICAL SPECIALTY INFORMATION DATE 8/16/72

PRODUCT NAME Sears Laundry Detergent	PART NO. 9302
MANUFACTURER DeSoto, Inc.	00796
1700 S. Mt. Prospect Rd. MANUFACTURER'S ADDRESS Des Plaines. Illinois 60018	PHONE 312-296-6611
PRODUCT CATEGORY 1) Highly Toxic (poison) [X X X X X X X X X X	dous ingredients with asterisk (*). 64.7% 12.0 * 20.4
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED OF HAZARDOUS SUBSTANCES ACT: Caution: Eye irritant. May be harmful if swallowed children. Avoid contact with eyes and much	l. Keep out of reach of
irst Aid: External- Flush with cool water. If in ey 15 minutes, and contact physician immediat Internal - Give large quantites of milk, w or other citrus fruit juice and contact ph	ely. vater, diluted vinegar, lemon
this product requires special registration and/or labeling under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data. a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - YesNox; if yes, Registration NoEffective Dateto b. N.Y. City Fire Dept YesNox; if yes, C. of A. NoDate of Registration	Packaging 3 lb., State size of containers20 lb.,45 & 100# State type of container used (glass bottle, tube, metal can, aerosol, etc.) and type of top or cap CARDBOARD If packed in an aerosol or pressurized container, state the propellant (s) used:
Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements. c. Indiana - Yes Nox; if yes, as poison hazardous product or exemption. Date of registration	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval Date Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes x No	Date
e. Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering promunicipal agencies operating poison control centers or will which product content information must be sublitted by resident of MANUFACTURER	oducts with federal, state or the second that the second the second to t
PLACE OF BUSINESS Same as above	

WHIRLPOOL CORPORATION CHEMICAL SPECIALTY INFORMATION DATE 8/30/72 Commodity 00797 XRACK NO. 35720 STA-PUF Fabric Softener PRODUCT NAME A. E. Staley Manufacturing Company VFACTURER MANUFACTURER'S ADDRESS 2011 Swift Dr., Oak Brook, Illimois PHONE 312/986-1150 YES OR NO Specify exact formula showing percentage of every ingredient PRODUCT CATEGORY 1) Highly Toxic (poison) by weight. Indicate hazardous ingredients with asterisk (*). [XT X 2) Toxic 3) Corrosive (poison) The formula is considered a trade secret by the Company. \triangle Since this is a non-hazardous substance, it does not appear 4) Irritant necessary to disclose the formula. If problems develop you 5) Strong Sensitizer should contact our Research Director, Eric Engel. FLASHPOINT (TAG OPEN CUP) Medical inquiries should be directed to our Medical Director, AEROSOLS: Edwin E. Goldberg, M.D., P.O. Box 151, Decatur, Ill. FLASH-BACK? YES FLAME PROJECTION INCHES Tel. 217/423-4411, Ext. 548. VISCOSITY 10 cp S.U.S. LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED ON THE LABEL UNDER THE FEDERAL HAZARDOUS SUBSTANCES ACT: This is not considered a "hazardous substance" under the Federal Hazardous Substance Act. this product requires special registration and/or label-Packaging State size of containers 7-1/2 oz. ing under federal, state or city acts, laws, codes, etc., (Whirlpool) also offer qt., 1/2 gal & please specify and remit all pertinent data. State type of container used (glass a. U.S. Dept. of Agriculture (Insecticide, Fungicide and bottle, tube, metal can, aerosol, Rodenticide Act) etc.) and type of top or cap .E. plastic with vented metal cap Yes No X; if yes, Registration No.____ (pulp paper liner) If packed in an aerosol or pressur-Effective Date _____to___ N.Y. City Fire Dept. - Yes No X; if yes, C. of A. ized container, state the propellant (s) used:___ Date of Registration Attach a notarized affidavit certifying flash point and, ROUTING (This portion to be filled if aerosol, an affidavit certifying that the container out by Whirlpool) Law Dept. Approval _____ conforms to I.C.C. requirements. Date____ Indiana - Yes No X; if yes, as poison hazardous product or exemption. Date of registration c. Engineering Dept. Approval____ d. Federal Hazardous Substances Act - Yes No X Date__ Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test results 2. Please attach four copies of present label

It is agreeable with us to have Whirlpool Corporation use the information we have supplied on Form S1R017028 for the purpose of registering products with federal, state or municipal agencies operating poison control centers or with a governmental agency to which product content information must be submitted by requirement of law.

SIGNATURE OF MANUFACTURER A. E. Staley Manufacturing Company By

....

A. D. Urfer

PLACE OF BUSINESS 2011 Swift Drive, Oak Brook, Illinois

Consumer Products Research Dept.

TKDA

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED ENGINEERS AND ARCHITECTS

September 15, 1972

1408 PIONEER BUILDING SAINT PAUL, MINNESOTA 55101 224-7891

U.S. Army, Corps of Engineers
District Engineer, St. Paul District
1217 U.S. Post Office and Customhouse
180 East Kellogg Boulevard
St. Paul, Minnesota 55101

RE: Dredged Sand Fill
Pigs Eye Lake Area Coal Handling Facilities
for St. Paul Port Authority
Commission No. 5801

Gentlemen:

We are requesting a permit in behalf of the St. Paul Port Authority for dredging along the Mississippi River in the area shown in redpencil on the plan enclosed. The permit drawings are signed by Mr. Frank D. Marzitelli, Executive Vice President of the St. Paul Port Authority. The material to be dredged is to be taken from the Mississippi River bottom and accretions located along the northeast bank of the river, the area from which the dredged material is to be taken is located in parts of Sections 15 and 22, Township 28N, R22W, and between river miles 834 and 835.3, all in Ramsey County.

The request for this permit to dredge the river and accretions is a continuation of the permit which was requested on September 25, 1967, and which was approved on November 27, 1967. The dredging work included in this permit was completed sometime in 1969.

The depth to which the dredging will be carried will be from 28 feet to 40 feet or to a lesser depth if rock is encountered in the area. The quantity of dredged material to be removed is estimated at 3,500,000 cubic yards. We request a permit for dredging 3,500,000 cubic yards from the river or the land adjacent thereto. The Port Authority is the owner of the property adjacent to the river upon which dredging is proposed.

Dredged Sand Fill September 15, 1972 Page 2

The project will be scheduled for bids when approval is received from the Department of Natural Resources and the Pollution Control Agency, State of Minnesota, and from the Corps of Engineers. Applications have been submitted to the State of Minnesota Departments for their review and approval.

This project consists of constructing facilities for the storage and re-handling of Coal shipped to the site by rail from Coal mines located in Montana and Wyoming. The Coal has a low sulphur content and is required by the users of Coal for steam generation for the operation of Power Units to generate electrical energy, heating and other types of power used by industry within a 200 mile radius of the Coal storage site. In order that industry in this area meets the Federal and State of Minnesota requirements of the Air Pollution laws and regulations, it is necessary to begin work on this project at the earliest possible date. This request voids our request for a permit submitted with our letter of February 17, 1972. The reason for this change is that the site has been relocated to meet the requirements of the Department of Natural Resources, State of Minnesota. The relocated site is subject to their review and approval.

We are enclosing the original tracing and 4 prints showing the dredging area and the fill area and the original tracing and 4 prints of the cross sections.

Yours very truly,

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED

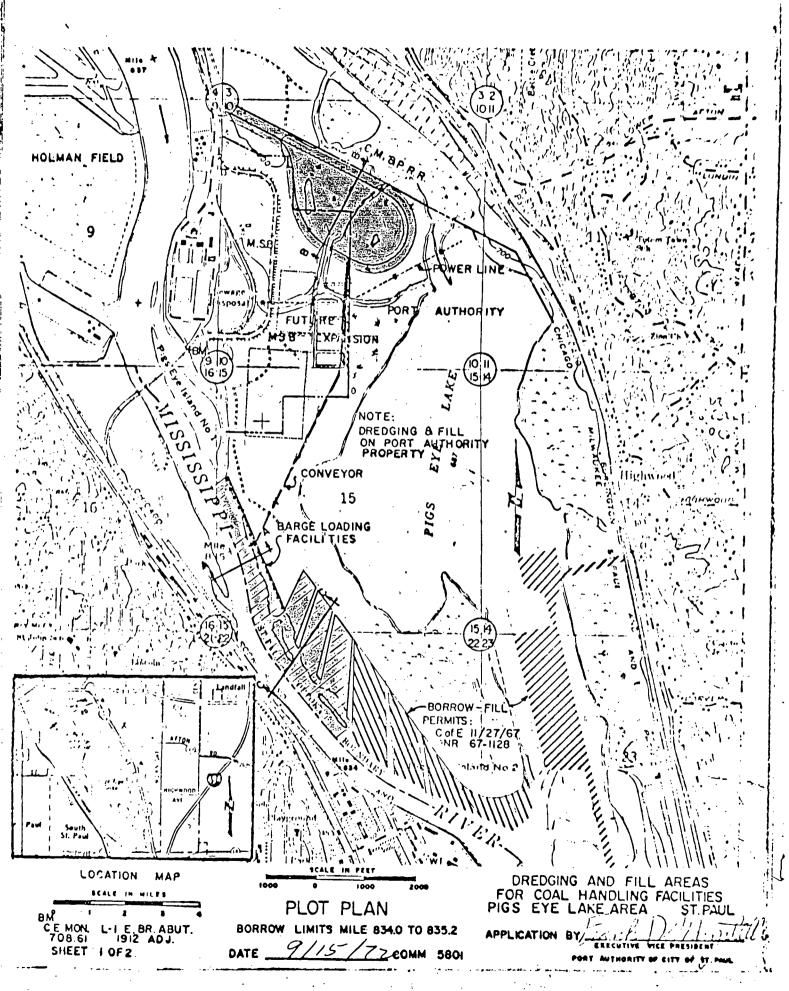
Arnold M. Stelfes, P.E.

AMS:ea

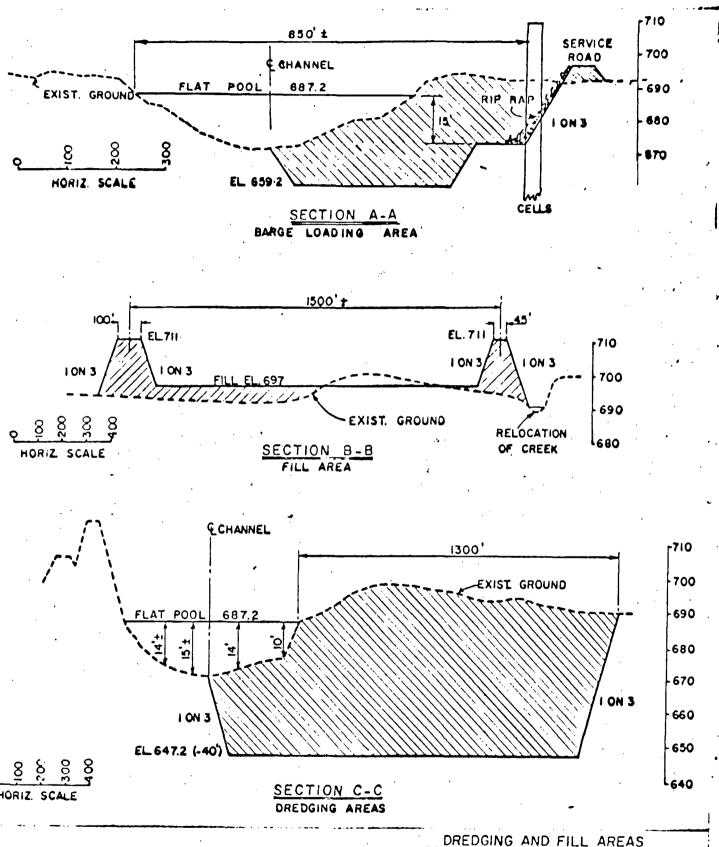
Enc.

cc: Mr. Eugene Kraut, St. Paul Post Authority

Mr. Clifford Ramsted



1 m



SHEET 2 of 2

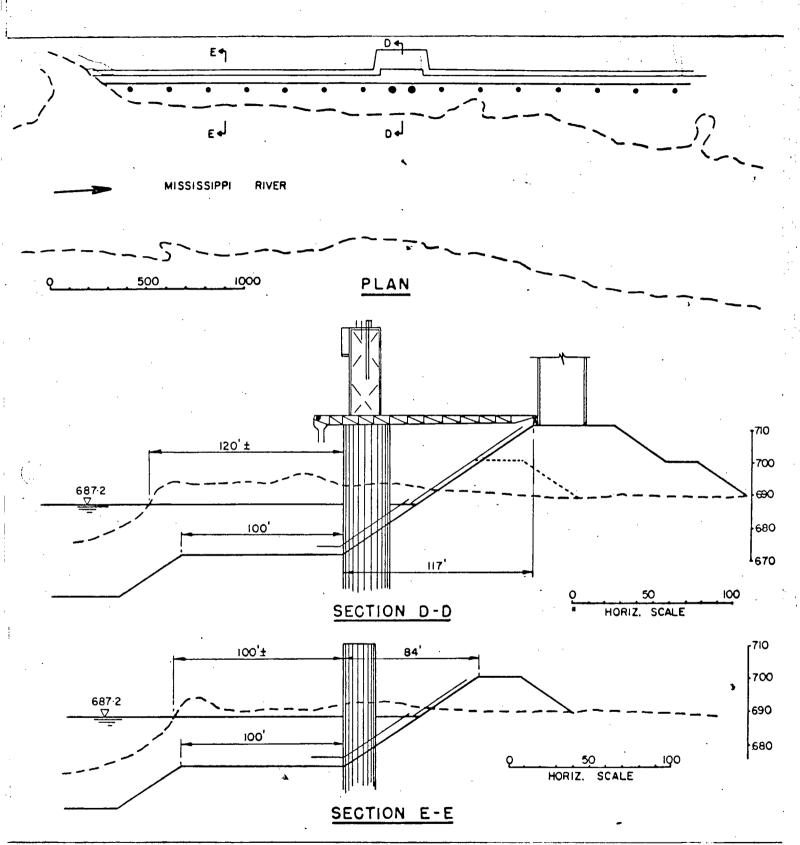
DATE 9/15/72 COMM. 5801

SECTIONS

DREDGING AND FILL AREAS FOR COAL HANDLING FACILITIES PIGS EYE LAKE AREA ST. PAUL

APPLICATION BY FOR THE VICE PARENCENT

PORT AUTHORITY OF CITY OF ST. PAUL



BARGE LOADING FACILITIES FOR COAL HANDLING FACILITIES PIGS EYE LAKE AREA ST. PAUL

APPLICATION BY

SHEET I of I

DATE ____

COMM. 5801

EXECUTIVE VICE PRESIDENT

PORT AUTHORITY OF CITY OF ST. PAUL

MATERIAL SAFETY DATA SHEET

NPCA 1-72

FOR COATINGS, RESINS AND RELATED MATERIALS

00803

E OF PREP

10-2-72

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

Section I

NUFACTURER'S NAME

PPG Industries, Inc.

Coatings & Resin Division

REETADDRESS

One Gateway Center CITY. STATE. AND ZIPCODE Pittsburgh, PA 15222

Attn: Coordinator of Environmental Control

ERGENCY TELEPHONE NO.

Area Code 412

434-3131

DUCT CLASS

Epoxy Polyamide

MANUFACTURERS CODE DENTIFICATION

W20200

(179021M)

ADENAME

Avocado Green Epoxy Enamel

Whirlpool #621258

Section II — HAZARDOUS INGREDIENTS

REDIENT	PERCENT	TU PPM	ma/M³	· LEL	VAPOR PRESSURE
(ylol & Other Aromatic Hydrocarbons 2-Ethoxy Ethanol 2-Eutoxy Ethanol 4ethyl Isobutyl Ketone Foluol 3. acetone Alcohol	20 5 <5.0 <5.0 <5.0	100 100 50 100 100 50		1.1 2.6 1.1 1.4 1.3 1.8	6.3 3.8 0.6 16.0 22.4 1.1
(Lead as % Non-Volatile < 0.06%)					

Section III - PHYSICAL DATA

110 to 168°C

VAPOR DENSITY

HEAVIER

LIGHTER, THAN AIR

APORATION RATE

FASTER

X SLOWER, THAN ETHER

PERCENT VOLATILE

WEIGHT PER

9.74

Section IV — FIRE AND EXPLOSION HAZARD DATA

IT CATEGORY

Flammable

FLASH POINT

Lower Comp. = 60°F

LEL 1.2

Upper Comp. = 76° F

Pensky-Martens Closed Cup Use National Fire Frotection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical or foam) designed to extinguish NFPA Class IB flammable liquid fires.

HUSUAL FIRE AND EXPLOSION HAZARDS Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containors may explode when exposed to extreme heat. not apply on hot surfaces. .

Water spray may be ineffective. Water may be used to cool closed PECIAL FIRE FIGHTING PROCEDURES containers to prevent pressure build-up, and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

O	O	8	Ö	4

Section V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

See Section II.

ECTS OF OVEREXPOSURE Inhalation: Anesthetic. Irritation of the respiratory tract or acute ervous system depression characterized by headache, dizziness, staggering gait, confusion, nonsciousness or coma.

kin or Eye Contact: Primary irritation.

EMERGENCY AND FIRST AID PROCEDURES Fumes: Remove from exposure. Restore breathing. Keep warm and juiet. Notify a physician. Splash (Eyes): Flush immediately with copious quantities of unning water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section	VI — REACTIVITY DATA
STABILITY UNSTABLE X STABLE INCOMPATABILITY (Materials to avoid) Amines HAZARDOUS DECOMPOSITION PRODUCTS May produce relding. Fumes may contain carbon monox	conditions to Avoid Unknown hazardous fumes when heated to decomposition as in ide and oxides of nitrogen.
HAZARDOUS POLYMERIZATION X MAYOCCUR W	VILL NOT OCCUR
Section VII — S	SPILL OR LEAK PROCEDURES
and electrical, static, or frictional sp th inert absorbent and non-sparking to	o Remove all sources of ignition (flames, hot surfaces parks). Avoid breathing vapors. Ventilate area. Remove tools. The with local, state and federal regulations.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In Outdoor or open areas use Eureau of Mines approved mechanical filter respirator to remove solid air borne particles of overspray during spray application. In restricted ventilation areas use Eureau of Mines approved chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use Eureau of Mine approved air line type respirators or hoods.

ventuation Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptable limit, LEL in Section IV below stated limit, and to recove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES

Required for prolonged or repeated contact.

EYE PROTECTION

Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not store above 1200F. Store large quantities in buildings designed and protected for storage of IFPA Class IB flammable liquids.

other Preconutions Do not take internally. Containers should be grounded when pouring. Avoid frefall of liquid in excess of a few inches. Do not flame cut, braze or weld without U.S. Bureau of Mines approved respirator or appropriate ventilation.

See text of label warning on attached chaet.

Date Oct 3,1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of Aug. 25, 1972 to 5817 29, 1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
SEPT 29	164, 644, 000	25489.700	
AUG 25	134721,000	20, 300, 000	
·			
·	<u> </u>	<u> </u>	
Discharge	29,923,000 Gallons	5.189,700 Gallons	35,112,700 Gallons

WHIRLPOOL CORPORATION

by 1/1/4-0

LAW OFFICES
ROSEN & SUMMERS

WILLIAM S. ROSEN JOSEPH P. SUMMERS JAMES S. HOLMES HOWARD L. KAPLAN DEN 00806

630 OSLORN BUILDING
SAINT PAUL, MINNESOTA 55102
TELEPHONE 227-7731
AREA CODE 612

October 11, 1972

Honorable Lawrence D. Cohen Mayor

Honorable Ruby Hunt Honorable William Konopatzki Honorable Robert Sprafka Honorable Rosalie Butler President of the Council

Honorable Leonard Levine Honorable Dean Mcredith Honorable Victor J. Tedesco

Ladies and Gentlemen:

On June 29, 1972, representatives of St. Paul's private residential refuse haulers met with Mayor Cohen, Councilman Hunt, and various representatives of city government, county government, and labor organizations to present a plan for instituting a joint public-private system of mandatory solid waste collection for the city of St. Paul.

We were requested at the meeting to organize ourselves and to submit a written proposal for consideration. Representatives of city government and labor organizations were requested to examine the concept of our proposal and to check with their opposite numbers in Minneapolis, where a similar system was in effect, to determine how the Minnespolis system was working.

The enclosed proposal is respectfully submitted by the St. Paul Sanitation Cooperative in response to the request made at the June meeting.

We respectfully request that this proposal receive your earnest and favorable consideration.

Sincerely,

JOSEPH P. SUMMERS

JPS:jae

Enclosure

A PROPOSAL

FOR A MANDATORY SYSTEM OF SOLID WASTE COLLECTION

RESPECTFULLY SUBMITTED TO THE HONORABLE MAYOR AND COUNCIL OF THE CITY OF ST. PAUL

BY THE

ST. PAUL SANITATION COOPERATIVE

DATED: October 11, 1972

GEORGE OXFORD
PRESIDENT
2305 LINWOOD AVENUE EAST
ST. PAUL, MINNESOTA 55119

ROSEN & SUMMERS
JOSEPH P. SUMMERS
630 OSBORN BUILDING
ST. PAUL, MINNESOTA 55102

A

PROPOSAL

TO THE HONORABLE MAYOR AND COUNCIL OF THE CITY OF ST. PAUL

FOR A SYSTEM OF MAN DATORY SOLID WASTE COLLECTION

ST. PAUL SANITATION COOPERATIVE

OCTOBER 11, 1972

l.

INTRODUCTION

St. Paul needs a systematic, mandatory system for collecting solid wastes from single-family homes, duplexes, triplexes, and four-plexes. Both private haulers and public officials believe a system can be designed to provide better public service at substantially less cost per unit than present methods.

The St. Paul Sanitation Cooperative, working with the existing city refuse collection operation, can provide such a system, with no economic dislocation of the hundreds of people now employed in the St. Paul residential waste collection system.

2.

THE ST. PAUL SANITATION COOPERATIVE

The St. Paul Sanitation Cooperative is a cooperative association

organized under the laws of Minnesota. It has 55 members, representing substantially all firms now engaged in the collection of solid wastes from single-family homes and small multiple-unit buildings in St. Paul. Membership is open to any hauler who wants to join.

The St. Paul Sanitation Cooperative is a co-op, rather than a business corporation organized for profit. Each member -- large or small -- has but one vote in the management of its affairs and all profits are required by law to be distributed to the members on the basis of patronage.

The President of the Cooperative is George Oxford, 2305 Linwood Avenue, St. Paul, Minnesota 55119.

The Board of Directors are:

Willie D. Gray 1036 W. Ce	ntral Avenue
---------------------------	--------------

St. Paul, Minnesota 55104

St. Paul, Minnesota 55105

St. Paul, Minnesota 55102

Emil Oehrlein 1800 Century Avenue

Newport, Minnesota 55055

George Oxford 2305 Linwood Avenue East

St. Paul, Minnesota 55119

Frank F. Rauschnot 9985 Barnes Avenue East.

Inver Grove Heights, Minnesota 55075

The Board is elected annually by the membership.

Members of the Cooperative do not lose their identity. Each remains an independent businessman.

3.

THE PROPOSAL

We propose that the City of St. Paul engage the St. Paul Sanitation

WHIRLPOOL CORPORATION CHEMICAL SPECIALT	Y INFORMATION DATE
10-26-72 O495 PRODUCT NAME Epoxi Patch Tube (Coral Pink) #65C	PART NO. 674877
ANUFACTURER Servi-Supply Inc	00810
FACTURER'S ADDRESS Hysol Div, Dexter Corp., Olean,	NYPHONE
2) Toxic 3) Corrosive (poison)	dous ingredients with asterisk (*). % Diethylene Triamine, a skin imits formulation disclosure
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED HAZARDOUS SUBSTANCES ACT:	ON THE LABEL UNDER THE FEDERAL
(See Page 2)	
his product requires special registration and/or labeling under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data. a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes_No_X; if yes, Registration No	Packaging State size of containers State type of container used (glast bottle, tube, metal can, aerosol, etc.) and type of top or cap
b. N.Y. City Fire Dept Yes No X; if yes, C. of A.	If packed in an acrosol or pressurized container, state the propellant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements.	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
c. Indiana - Yes No χ ; if yes, as poison hazardous product or exemption. Date of registration	Date Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes X No	Date
 e. Other, such as Economic Poison Laws. l. Please attach any independent laboratory test results 2. Please attach four copies of present label 	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering pr municipal agencies operating poison control centers or wi which product content information must be submitted by re	oducts with federal, state or th a governmental agency to quirement of law.
PLACE OF BUSINESS Hysol Buripion Denter (no Olon	hU
THIS OF DUSTRESS (1/10) I WILLIAM TO CAP USE	

A. A. S. S. S.

A CONTRACTOR

(Back page copy)

Warning!

Part A (RESIN)

Caution...May Irritate Shin and Eyes

Contains Epoxy Resin

Avoid contact with skin and eyes

First aid: Eyes - immediately flush with
plenty of water.

Skin - Wash with soap and water.

Keep out of the reach of children

Part B (HARDENER)

Warning!

May cause skin sensitization or other allergic responses.
Causes eye irritation.

Contains diethylene triamine.
Avoid inhalation of vapor.
Use good ventilation.
Prevent contact with skin and eyes.

First aid: Eyes - immediately flush with plenty of water.

Skin - wash immediately with soap and water.

Keep out of the reach of children

WHIRLPOOL CORPORATION CHEMICAL SPECIALT	Y INFORMATION DATE
10-26-72 0/82 PREDUCT NAME Patch Tube Kit #97C (Aqua Mist)	PART NO. 674979
MANUFACTURER Servi-Supply Co.	00812
FACTURER'S ADDRESS Hysol Div., Dexter Corp., Olean,	NYPHONE
2) Toxic	dous ingredients with asterisk (*). 0% Diethylene Triamine, a skin limits formulation disclosure
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED HAZARDOUS SUBSTANCES ACT:	ON THE LABEL UNDER THE FEDERAL
(See Page 2)	
his product requires special registration and/or label- in, under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data.	Packaging State size of containers
B. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No X; if yes, Registration No. Effective Date	State type of container used (glambottle, tube, metal can, aerosol, etc.) and type of top or cap If packed in an aerosol or pressure.
b. N.Y. City Fire Dept Yes No; if yes, C. of A. No.	ized container, state the propel- lant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements.	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
c. Indiana - Yes No; if yes, as poison hazardous product or exemption. Date of registration	Date Engineering Dept. Approval
d. Federal Hazardous Substances Act - Yes No	Date
 e. Other, such as Economic Poison Laws. l. Please attach any independent laboratory test results 2. Please attach four copies of present label 	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering pr municipal agencies operating poison control centers or wi which product content information must be submitted by re	oducts with federal, state or the a governmental agency to
SIGNATURE OF MANUFACTURER Almos P Hornburg	1/20/22
PLACE OF BUSINESS Hysal Pinarios, Perter Corp.	Olan, ny.

(Back page copy)

Warning!

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Part B (HARDENER)

Warning!

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Causes eye irritation.

Contains dicthylene triamine.

Avoid inhalation of vapor.

Use good ventilation.

Prevent contact with skin and eyes.

First aid: Eyes - immediately flush with plenty of water.

Skin - wash immediately with soap and water.

Keep out of the reach of children

WHIRLPOOL CORPORATION CHEMICAL SPECIALT	Y INFORMATION DATE
PRODUCT NAME Epoxi Kit Blue #316 0434	PART NO. 674890
MANUFACTURER Servi-Supply, Inc.	00814
FACTURER'S ADDRESS Hysol Div. Dexter Corp., Olean,	NY PHONE
2) Toxic 3) Corrosive (poison) Hardener contains about 20 4) Irritant	dous ingredients with asterisk (*). % Diethylene Triamine, a skin limits formulation disclosure
LIST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED HAZARDOUS SUBSTANCES ACT:	ON THE LABEL UNDER THE FEDERAL
(See Page 2)	
in this product requires special registration and/or label- in under federal, state or city acts, laws, codes, etc., please specify and remit all pertinent data.	Packaging State size of containers
a. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No ; if yes, Registration No. Effective Date	State type of container used (gla bottle, tube, metal can, aerosol, etc.) and type of top or cap
b. N.Y. City Fire Dept Yes No; if yes, C. of A. No.	If packed in an aerosol or pressu ized container, state the propellant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements.	ROUTING (This portion to be fille out by Whirlpool) Law Dept. Approval
c. Indiana - Yes No; if yes, as poison hazardous product or exemption. Date of registration	DateEngineering Dept. Approval
d. Federal Hazardous Substances Act - Yes No	Date
 e. Other, such as Economic Poison Laws. l. Please attach any independent laboratory test results 2. Please attach four copies of present label 	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering pr municipal agencies operating poison control centers or wi which product content information must be submitted by re	oducts with federal, state or the a governmental agency to quirement of law.
PLACE OF BUSINESS Hoof Pivroin Dutte Corp.	

(Back page copy)

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Avoid inhalation of vapor.
Use good ventilation.
Prevent contact with skin and eyes.

First aid: Eyes - immediately flush with plenty of water.

Skin - wash immediately with soap and water.

Keep out of the reach of children

DCN: 00814 SITE NAME: PIG EYE LANDFILL = PAGES: ___ DATE: 10-30-72 SOURCE: AUTHOR: WHRUP RECIPIENT: Mart Re: WHIRLP Clear water Dischage TITLE: WHIRIP CHEW WATE Machange Charts WHELP PRPS TRANSPORTERS pp. CODED BY ENTERED BY OABY

Date OCT 30, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of $\frac{\sum p_7 29, 1972}{\sum 1972}$ to $\frac{27, 1972}{\sum 1972}$.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
Oct 27	188,938,000	29,683,200	
SEPT29	164,644,000	25,489,700	
Discharge	23,294,000 Gallons	4,193,500 Gallons	27,4875ac Gallons

10-30-724

WHIRLPOOL CORFORATION

by NAtural

Date Aug 30, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of July 28, 1972 to Aug. 25, 1972

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
AUG 25	134,721,000	20,300,000	
JUL 28	114,554,000	16,356,400	
Discharge	20.167000 Gallons	3 943 600 Gallons	24,110,600 Gallons

WHIRLPOOL CORPORATION

by Marin Horal

Date AUG 11,1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE & FETTO WATER USAGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of TUNE 30,1972 to July 28,1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
JULY 28	114534 000	16 356,400	
JUNE 30	90,905,000	12 146 900	
	,		
	·		
Discharge	23597100 Gallons	4,209,500 Gallons	27,808,50 Gallons

WHIRI POOL CORPORATION

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tility byencer

Date JUNE 5, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of APC 28 1972 to Play 26 1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
MAY26	59.738 co	7.193200	
APR 22	32.700,000	3551,000	
Discharge	27038 600 Gallons	3,642,200 Gallons	30680,200 Gallons

WHIRLPOOL CORPORATION

by Harl

Militylingineer

147. Poseult

Nec'D

46030 -

Date July 5.1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of MANDE, 1972 to Truck 30, 1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
JUNE 30 1972	90 955 000	12 146,900	
	59 738 000	7 193 200	
Discharge	31 217 000 Gallons	4.953,700 Gallons	36,170,700 Gallons

WHIRLPOOL CORPORATION

by 21 Klack

Utility Enquire

\$7110-

150 JAN 394 JUNE 30, 147/100

Date Ava 11,1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of TUNE 30 1972 to 1004 25,1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg: 17 Meter Reading - Gallons	Total Discharge
JULY 28	114554000	16 356,400	
JUNE 30	90 905 000	12 146 900	
			•
Discharge	23599,000 Gallons	4 209 500 Gallons	27.808.550 Gallons

WHIRLPOOL CORPORATION

by <u>11/4-26</u>

Mility Enquier

147/120

A sylv?

Date Au 6 30, 1972

Wastes Section - Sewer Losign Division Department of Public Works
Room 38 City Hall & Court House
St. Paul, Minnesota 55

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of July 28,1972 to Aug 25,1972

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
AUG 25	134,721,000	20 300,000	
JUL 28	114,554,000	16,356,400	
Discharge	20.167000 Gallons	3 943.4-00 Gallons	24,110, 1500 Gallons

WHIRLPOOL CORPORATION

by Mern Haral

4739 -

Date Oct 3,1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of Aug. 25, 1972 to 5817 29, 1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
SEPT 29	164,644,000	25489700	
AUG 25	134721,000	20,300,000	
		<u> </u>	
·			
Discharge	29,923 coo Gallons	5.159,700 Gallons	35,1/2.700 Gallons

WHIRLPOOL CORPORATION

by Veteral

689

Date OCT 30, 1972

Wastes Section - Sewer Design Division Department of Public Works Room 38 City Hall & Court House St. Paul, Minnesota 55102

Re: CLEAR WATER DISCHARGE

Clear Water Discharge from Whirlpool Corporation, St. Paul Division, for the period of SEPT 29, 1972 to OCT 27, 1972.

Reading Date	Bldg. 21 Meter Reading - Gallons	Bldg. 17 Meter Reading - Gallons	Total Discharge
Oct 27	188,938 000	29 683,200	
SEPT29	164 644,000	25,489,700	
,			
Discharge	13.294,000 Gallons	4.193,500 Gallons	27,487500 Gallons

WHIRLPOOL CORFORATION

by NAVal

A5329

(1) (N)

11-3-72)—)	7
DUCT NAME Fibre Grease MARFAK HU	PART NO.	(99342)
UFACTURER		00827
CTURER'S ADDRESS New York N. Y 10017	PHONE 2/2-95	3-6951
Strong Sensitizer Lead menhad		asterisk (*).
T ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRE ARDOUS SUBSTANCES ACT: None required	D ON THE LABEL UNDER TH	HE FEDERAL
his product requires special registration and/or label- , under federal, state or city acts, laws, codes, etc., ase specify and remit all pertinent data. U.S. Dept. of Agriculture (Insecticide, Fungicide and	State size of conta	iner used (glas
Rodenticide Act) - YesNo; if yes, Registration No Effective Dateto N.Y. City Fire Dept YesNo; if yes, C. of A. No	bottle, tube, metal etc.) and type of t If packed in an aer ized container, sta lant (s) used:	op or cap osol or pressu: te the propel-
Nate of Registration Attach a notarized affidavit certifying flash point and if acrosol, an affidavit certifying that the container conforms to I.C.C. requirements.	out by Whirlpool) Law Dept. Approval_	
Indiana - Yes No 1; if yes, as poison hazardous product or exemption. Date of registration	Engineering Dept. A	pproval
Federal Hazardous Substances Act - Yes No X	Date	
Other, such as Economic Poison Laws. 1. Please attach any independent laboratory test resul 2. Please attach four copies of present label	ts	•
t is agreeable with us to have Whirlpool Corporation uplied on Form S1R017028 for the purpose of registering municipal agencies operating poison control centers or which product content information must be submitted by	products with federal, with a governmental ag	state or
GRATURE OF FARUFACTURER		
ACE OF BUSINESS		

11-3-72 PUCT MAME	Perma	gum #576-l		PART NO.	-11	-8-T2	
		•			00828	#1	
FACTURER Pres	tite Divis	ion					
FACTURER'S ADDRESS_	St. L	ouis, Mo.		PHONE_(314)	664-6000	· · ·	
CUCT CATEGORY Righly Toxic (poisor Toxic Corrosive (poison) Irritant Strong Sensitizer SHPOINT (TAG OPEN CUAEROSOLS: FLASH-BACK? YES N FLAME PROJECTION N/A	DP) 300 °F +	Specify exact formed by weight. Indicated Indicated Polybutene, 3000 set Oleic acid antioxidant, hinder Titanium dioxide Ground limestone Asbestos Fiber, 7R	E hazaro	dous ingredien ### BY V 25 these pl less less 30 these	of every ing ts with aster WT, RANGE to .35 s than 1 s than 0.1 s than 2 to 40 to 40	redient isk (*).	
TALL NECESSARY WARMARDOUS SUBSTANCES AC		NTS AND ANTIDOTES RE	QUIRED (U JEBAJ EST NC	NDER THE FEDE	RAL	
-	e or city a	egistration and/or lets, laws, codes, et	1	Packaging State size of 6" x 9" x 19	9"		
U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No X; if yes, Registration No. Effective Date to				State type of container used (glabottle, tube, metal can, aerosol, etc.) and type of top or cap If packed in an aerosol or pressu			
N.Y. City Fire Dept Ro. Date of Registratio	ized container, state the pro-						
Attach a notarized if aerosol, an affi conforms to I.C.C.	ROUTING (This out by Whirlp Law Dept. App	001)	e filled				
Indiana - Yes No X; if yes, as poison hazardous product or exemption. Date of registration			Date Engineering D	ept. Approval			
Federal Hazardous S	Date						
Other, such as Econ 1. Please attach a 2. Please attach i	iny independe	ent laboratory test	results				
		: Whirlpool Corporate purpose of registe				•	

plied on Form S1R017028 for the purpose of registering products with federal, state or submicipal agencies operating poison control centers or with a governmental agency to which product content information must be submitted by requirement of law.

EATURE OF MARGEACTURES TRANSPORTS

ECE OF BUSINESS ST. LOUIS, MO.

It is agreeable with us to have Whirlpool Corporation use the information we have supplied on Form S1R017028 for the purpose of registering products with federal, state or municipal agencies operating poison control centers or with a governmental agency to which product content intermed by submitted by requirement of law.

SIGNATURE OF MANUFACTURER L. VanVolkinburg

Dow Corning Corporation PLACE OF BUSINESS

ODUCT NAME	Alumila	stic		<u> </u>	PART NO.	542639	
.nufacturer_	Parr In	c.	· ·			00	0830
ACTURER'S	ADDRESS_		cuse Avenue veland, Ohio	44110	PHONE	2 16/692 <u>- 1000</u>	
ODUCT CATEGOR Highly Toxic Corrosive Irritant Strong Sens ASHPOINT (TAG AEROSOLS: FLASH-BACK FLAME PROSESSITYGun C	ic (poison) sitizer G OPEN CUE K? YES JECTION	YES OR NO YES OR NO X X X X X Y X X X X X X X	Specify exact by weight. 33% 33% 5%	formula show Indicate hazar Processed Ve Volatile Thinn Aluminum Pa Fillers & Fib- none hazard	dous ingred getable Oil ners ste ers	ients with as	sterisk (*).
ST ALL NECESS			ITS AND ANTIDO	OTES REQUIRED :	ON THE LABE	L UNDER THE I	FEDERAL
	Contains Do not us Harmful i physician	I: COMBUS Petroleum e near fire if swallowed immediatel of reach of	Distillate or flame. I. Do not industy.	uce vomiting.	Call a	•	
	ral, state	or city ac	gistration arets, laws, coo		Collapsil	of container	e
U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - YesNo_X; if yes, Registration No Effective Dateto			gicide and	State type of container used (gla bottle, tube, metal can, aerosol, etc.) and type of top or cap			
N.Y. City I	Fire Dept.	- YesN	to X; if yes	s, C. of A.	ized conta	in an aeroso iner, state (sed:	the propel-
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements.			out by Whi Law Dept.	Approval			
			, as poison_ ate of regist		Ì	g Dept. Appro	
Federal Haz	zardous Su	ibstances Ac	t - YesNo	<u>X</u>	Date		
1. Please	attach ar	•		test results		•	
lied on Fo	orm S1R017 agencies o uct conter	7028 for the operating point informati	purpose of raison control on must be se	registering pr centers or wi demicted by re	oducts with th a govern quirement o	federal, sta mental agency	ate or y to
LACE OF BUSINE							
							

ODUCT NAME No. 524 Mastic Sealer	PART NO) <u>505</u>	587	
NUFACTURER Inmont Corporation, Presstite Products			00831,,	
ACTURER'S ADDRESS St. Louis, Mo.	PHONE	(314) 6	64-6000	· ——
ODUCT CATEGORY Highly Toxic (poison)			th asteris	
ST ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED C ZARDOUS SUBSTANCES ACT:	ON THE LAI	BEL UNDER	THE FEDERA	L
NONE			o Ton	
nis product requires special registration and/or label- under federal, state or city acts, laws, codes, etc., ease specify and remit all pertinent data. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - YesNo_X; if yes, Registration No Effective Dateto N.Y. City Fire Dept YesNo_X; if yes, C. of A. No.	State type bottle, etc.) and If packed ized con	ze of conf Metal Can pe of conf tube, metal d type of	tainers Attainer used at can, aer top or caperosol or pate the pr	l (gla cosol,
Date of Registration Attach a notarized affidavit certifying flash point and, if aerosol, an affidavit certifying that the container conforms to I.C.C. requirements. Indiana - Yes No x; if yes, as poison hazardous product or exemption. Date of registration	out by Wi Law Dept Date	hirlpool) . Approva	tion to be	
Federal Hazardous Substances Act - Yes No X Other, such as Economic Poison Laws. NONE 1. Please attach any independent laboratory test results 2. Please attach four copies of present label			•	
It is agreeable with us to have Whirlpool Corporation use plied on Form S1R017028 for the purpose of registering promunicipal agencies operating poison control centers or with which product content information must be submitted by reconstructed of Manufactures. INMONT CORPORATION	oducts wi th a gove	th federa rnmental	l, state of	
LACE OF BUSINESSST. LOUIS, MO.				

DUCT NAME 439 Permagum Cords	PART NO. 212643
ULACTURER Inmont Corporation, Presstite Products	00832
CTURER'S ADDRESS St. Louis, Mo.	PHONE (314) 664-6000
Highly Toxic (poison) X by weight. Indicate hazar Toxic X INGREDIENTS Corrosive (poison) X INGREDIENTS Corrosive (poison) X INGREDIENTS Corrosive (poison) X INGREDIENTS Polybutene, 3000 sec. Oleic, Acid Antioxidant, hindered phenomenate of the project of t	dous ingredients with asterisk (*). # BY WEIGHT 26 to 36 less than 1
T ALL NECESSARY WARNING STATEMENTS AND ANTIDOTES REQUIRED ARDOUS SUBSTANCES ACT:	ON THE LABEL UNDER THE FEDERAL
NONE	
product requires special registration and/or label- under federal, state or city acts, laws, codes, etc., se specify and remit all pertinent data. U.S. Dept. of Agriculture (Insecticide, Fungicide and Rodenticide Act) - Yes No X; if yes, Registration No.	Packaging State size of containers Carton 2" x 6" x 6" approx. State type of container used (glasbottle, tube, metal can, aerosol, etc.) and type of top or cap
N.Y. City Fire Dept Yes No X ; if yes, C. of A.	If packed in an aerosol or pressured ized container, state the propellant (s) used:
Date of Registration Attach a notarized affidavit certifying flash point and, if acrosol, an affidavit certifying that the container conforms to I.C.C. requirements.	ROUTING (This portion to be filled out by Whirlpool) Law Dept. Approval
Indiana - Yes No X; if yes, as poison hazardous product or exemption. Date of registration	Engineering Dept. Approval
Rederal Hazardous Substances Act - Yes No X	Date
Other, such as Economic Poison Laws. NONE 1. Please attach any independent laboratory test results 2. Please attach four copies of present label	•
It is agreeable with us to have Whirlpool Corporation used on Form S1R017028 for the purpose of registering productional agencies operating poison control centers or wishich product content information must be submitted by re-	oducts with federal, state or the a governmental agency to
TURE OF MANUFACTURER INMONT CORPORATION OF BUSINESS ST. LOUIS, MO.	

00834

THE DEPARTMENT OF PUBLIC WORKS

OF THE

CITY OF ST. PAUL

INTER-OFFICE COMMUNICATION

T0:

Kent Schonberger

FROM:

Jim Schwartz

DATE:

November 15, 1972

SUBJECT: Unpaid Landfill Bills

The following refuse hauling firms have not paid all they owe to the City for dumping at the landfill:

> Ray Anderson Noyes Construction Co. Suburban Richard Schroeder Twin City Rubbish Walsh Tree Service Fragrant Trucking Beermann Service Poor Richard Rueth Contracting Cross Town

Licenses should not be issued to these firms until they have paid, as per conversation with the Corporation Counsel's Office. Some of these firms change names frequently so a check of new made.

JFS/jg

cc: Joe Crea



PUBLIC RELATIONS
& PERSONNEL
HEALTH DIVISION

R. T. RICHARDS

MANAGER
INDUSTRIAL HYGIENE AND TOXICOLOGY

TEXACO INC.

135 EAST 42ND STREET
NEW YORK, N. Y. 10017

November 16, 1972

Mr. J.W. Burke Whirlpool Corporation La Porte, Indiana 46350

Dear Mr. Burke:

This is in reply to your letter dated November 3, 1972 to our Niles, Mississippi office requesting completion of a Chemical Specialty Information form for Marfak HD # 2 grease. Attached, as requested, is a completed form. A similar product was tested for toxicity by an independent laboratory and the results were as follows:

- l. Oral ${\rm LD}_{50}$ (white rats) greater than 25 grams per kilogram of body weight.
- 2. Skin Absorption (white rats) no unusual effects when exposed at 1,2 and 4 milliters per kilogram per day for a 90 day period.
- 3. Skin and Eye Irritation (rabbits) no irritation noted to the skin and eyes.
- 4. Human Patch Testing-mt a primary skin irritant or skin sensitizing agent.

If you have any further questions, please let me know.

Very truly yours,

R.T. Ruhanda

R.T. Richards

RTR-AFG Att.